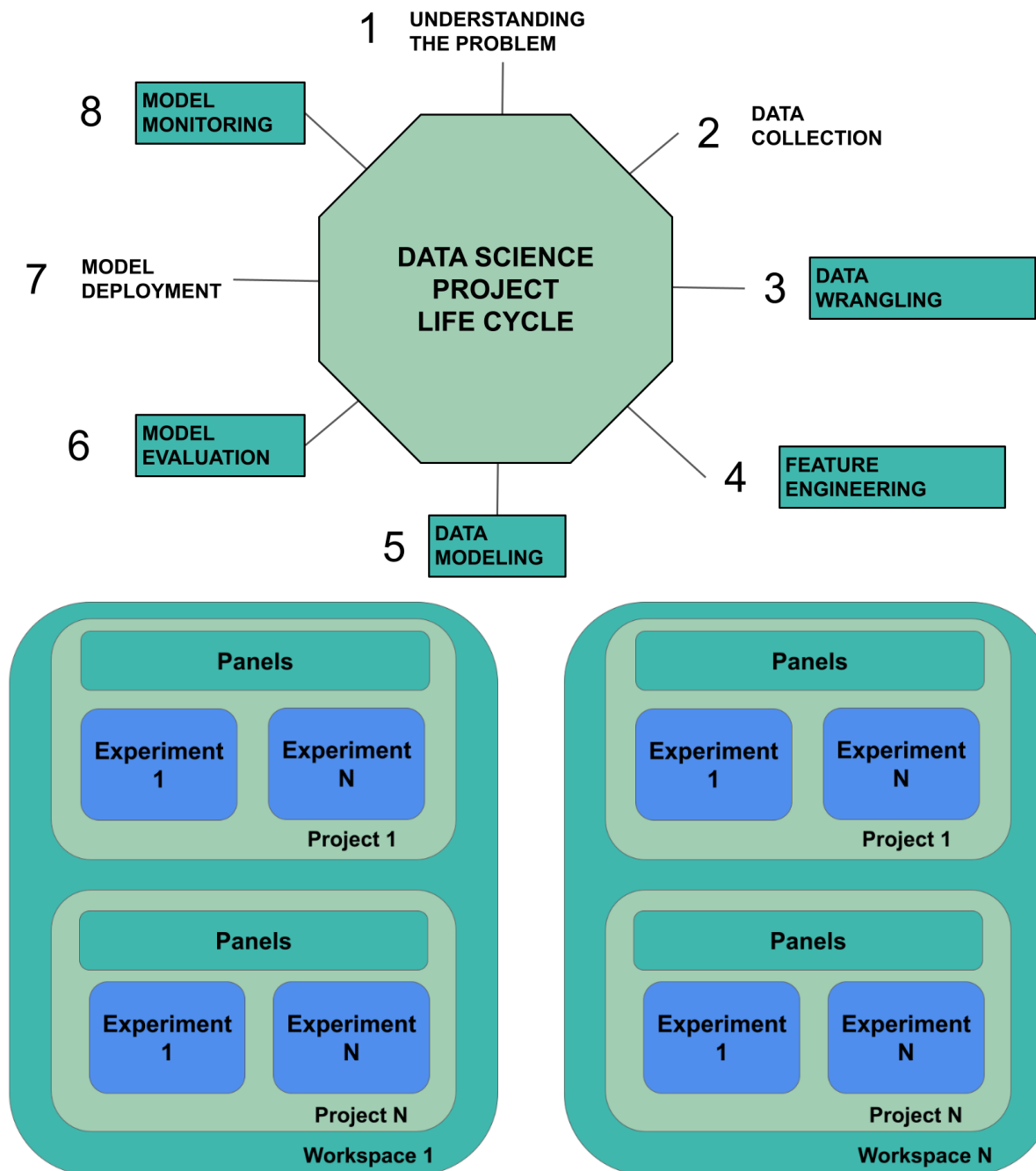





Chapter 1: An Overview of Comet




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Your workspaces

[Create a workspace](#)


alod83 Active 

13 Projects [>](#)

Plan	Created	URL	Set as default
Teams Workspace	2 months ago	/alod83	on  off

alod83-test 

0 Projects [>](#)

Plan	Created	URL	Set as default
Individual Workspace	10 days ago	/alod83-test	on  off

Create new project

Name

0/100 left

Description


Project Visibility

- ☐ Public (Anyone on the internet can see this project.)
- ☒ Private (You choose who can see experiments for this project.)

Cancel

Create

[Panels](#) [Experiments](#) [Notes](#) [Archive](#) [Manage](#) [Reports](#) [Auto Generated](#) [Save View](#) [Edit Layout](#) [Options](#) [+ Add](#)



This project has no experiments

See the quick start guide to learn how to run your first experiments

Add panel to project



BUILT-IN 4 FEATURED 24 WORKSPACE 3 PUBLIC 167 | [+ Create New](#) Panels Docs

4 panels | Sort By **Last Saved** ▾ | 🔍 Search...



Line Chart

Last saved: Feb 07, 22 by comet

The Line Chart allows you to visualize a metric (the X axis) against (the Y axis) time (duration, wall time, or step), or against...

[Add >](#)



Scatter Chart

Last saved: Feb 07, 22 by comet

The Scatter Chart allows you to visualize a metric or parameter (the Y axis) against (the X axis) another metric or parameter.

[Add >](#)



Bar Chart

Last saved: Feb 07, 22 by comet

The Bar Chart allows you to visualize a metric's aggregation (the Y axis bar height, sum by default) against (the X axis)...

[Add >](#)



Parallel Coordinates Chart

Last saved: Feb 07, 22 by comet

The Parallel Coordinates Chart allows you to visualize a series of metrics or parameters where the Y axis is metric or...

[Add >](#)

Add panel to project

CHART SETTINGS

Plot Type ⓘ
☒ Bar ☐ Box Plot ☐ Violin Plot

Y-Axis
sys.cpu.percent.03 X ▾

Y-Axis Aggregation
last ▾

Y-Axis Range
Min Max

☒ Grouping disabled ⓘ

Orientation
☒ Vertical ☐ Horizontal

CHART PREVIEW

Parameters Configuration

< Back Bar Chart

Cancel Reset Done

Options

Query 13

Version History ▾

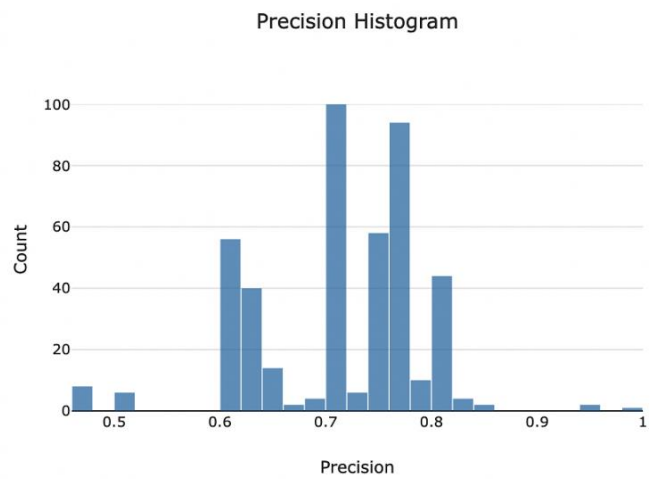
```
1 {  
2   "metric": "precision"  
3 }
```

Configuration Parameters
in the form of key-value pairs

CHART PREVIEW

 Panels DocsMetric Histogram 

<> Edit Code

Static ☒

< Back

Metric Histogram

Cancel

Reset

Done

Indicator Name	Indicator Code
Agriculture, forestry, and fishing, value added (% of GDP)	NV.AGR.TOTL.ZS
Broad money (% of GDP)	FM.LBL.BMNY.GD.ZS
Central government debt, total (% of GDP)	GC.DOD.TOTL.GD.ZS
Claims on other sectors of the domestic economy (% of GDP)	FS.AST.DOMO.GD.ZS
Coal rents (% of GDP)	NY.GDP.COAL.RT.ZS
Current account balance (% of GDP)	BN.CAB.XOKA.GD.ZS
Current health expenditure (% of GDP)	SH.XPD.CHEX.GD.ZS
Domestic credit provided by financial sector (% of GDP)	FS.AST.DOMS.GD.ZS
Domestic credit to private sector (% of GDP)	FS.AST.PRVT.GD.ZS
Domestic credit to private sector by banks (% of GDP)	FD.AST.PRVT.GD.ZS
Domestic general government health expenditure (% of GDP)	SH.XPD.GHED.GD.ZS
Expense (% of GDP)	GC.XPN.TOTL.GD.ZS
Exports of goods and services (% of GDP)	NE.EXP.GNFS.ZS
External balance on goods and services (% of GDP)	NE.RSB.GNFS.ZS
Final consumption expenditure (% of GDP)	NE.CON.TOTL.ZS
Foreign direct investment, net inflows (% of GDP)	BX.KLT.DINV.WD.GD.ZS
Foreign direct investment, net outflows (% of GDP)	BM.KLT.DINV.WD.GD.ZS
Forest rents (% of GDP)	NY.GDP.FRST.RT.ZS
General government final consumption expenditure (% of GDP)	NE.CON.GOV.T.ZS
Government expenditure on education, total (% of GDP)	SE.XPD.TOTL.GD.ZS
Government expenditure per student, primary (% of GDP per capita)	SE.XPD.PRIM.PC.ZS
Government expenditure per student, secondary (% of GDP per capita)	SE.XPD.SECO.PC.ZS
Government expenditure per student, tertiary (% of GDP per capita)	SE.XPD.TERT.PC.ZS
Gross capital formation (% of GDP)	NE.GDI.TOTL.ZS
Gross domestic savings (% of GDP)	NY.GDS.TOTL.ZS
Gross fixed capital formation (% of GDP)	NE.GDI.FTOT.ZS
Gross fixed capital formation, private sector (% of GDP)	NE.GDI.FPRV.ZS
Gross national expenditure (% of GDP)	NE.DAB.TOTL.ZS
Gross savings (% of GDP)	NY.GNS.ICTR.ZS
Households' and NPISHs' final consumption expenditure (% of GDP)	NE.CON.PRVT.ZS
Imports of goods and services (% of GDP)	NE.IMP.GNFS.ZS
Industry (including construction), value added (% of GDP)	NV.IND.TOTL.ZS

Manufacturing, value added (% of GDP)	NV.IND.MANF.ZS
Market capitalization of listed domestic companies (% of GDP)	CM.MKT.LCAP.GD.ZS
Merchandise trade (% of GDP)	TG.VAL.TOTL.GD.ZS
Military expenditure (% of GDP)	MS.MIL.XPND.GD.ZS
Mineral rents (% of GDP)	NY.GDP.MINR.RT.ZS
Natural gas rents (% of GDP)	NY.GDP.NGAS.RT.ZS
Net acquisition of financial assets (% of GDP)	GC.AST.TOTL.GD.ZS
Net incurrence of liabilities, total (% of GDP)	GC.LBL.TOTL.GD.ZS
Net investment in nonfinancial assets (% of GDP)	GC.NFN.TOTL.GD.ZS
Net lending (+) / net borrowing (-) (% of GDP)	GC.NLD.TOTL.GD.ZS
Oil rents (% of GDP)	NY.GDP.PETR.RT.ZS
Personal remittances, received (% of GDP)	BX.TRE.PWKR.DT.GD.ZS
Research and development expenditure (% of GDP)	GB.XPD.RSDV.GD.ZS
Revenue, excluding grants (% of GDP)	GC.REV.XGRT.GD.ZS
Services, value added (% of GDP)	NV.SRV.TOTL.ZS
Stocks traded, total value (% of GDP)	CM.MKT.TRAD.GD.ZS
Tax revenue (% of GDP)	GC.TAX.TOTL.GD.ZS
Total natural resources rents (% of GDP)	NY.GDP.TOTL.RT.ZS
Trade (% of GDP)	NE.TRD.GNFS.ZS
Trade in services (% of GDP)	BG.GSR.NFSV.GD.ZS

```

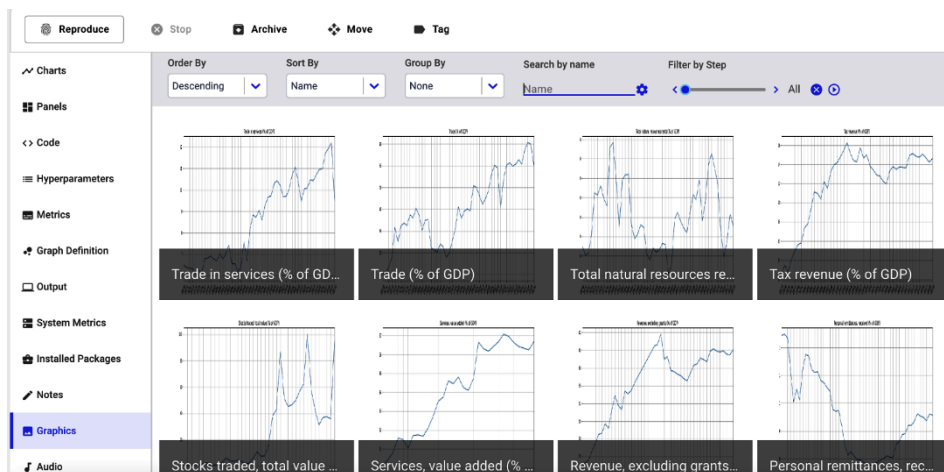
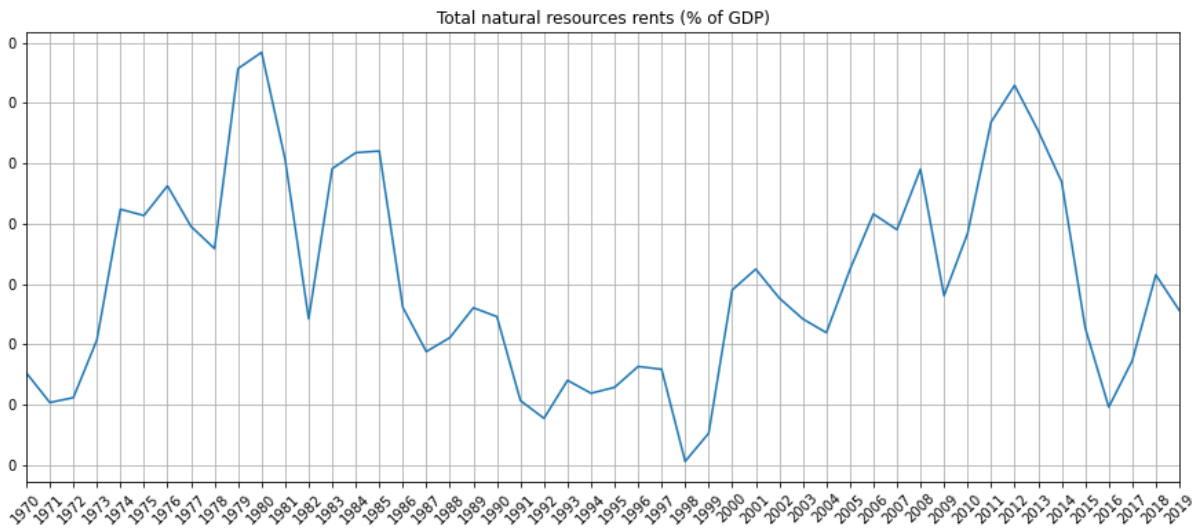
1 "Data Source","World Development Indicators",
2
3 "Last Updated Date","2021-12-16",
4
5 "Country Name","Country Code","Indicator Name","Indicator Code","1960","1961","1962","1963",
6 "Italy","ITA","High-technology exports (current US$)","TX.VAL.TECH.CD","","","","","","",

```

Remove these lines

Country Name	Country Code	Indicator Name	Indicator Code	1960	1961	1962	1963	...	2017	2018	2019	2020
Italy	ITA	Age dependency ratio, old (% of working-age population)	SR.POP.DPND.OL	14,56	14,78	14,98	15,18		35,14	35,59	36,06	36,57
Italy	ITA	Population ages 65-69, female (% of female population)	SP.POP.6569.FE.5Y	3,90	3,93	3,98	4,05		6,05	6,00	5,96	5,97
Italy	ITA	Population ages 25-29, female (% of female population)	SP.POP.2529.FE.5Y	7,36	7,34	7,37	7,40		5,06	5,02	4,98	4,95
Italy	ITA	Life expectancy at birth, total (years)	SP.DYN.LE00.IN	69,12	69,76	69,15	69,25		82,95	83,35	83,20	
Italy	ITA	Labor force participation rate, female (% of female population ages 15+) (national estimate)	SL.TLF.CACT.FE.NE.ZS		24,62				40,94	41,10	41,26	39,84
Italy	ITA	Merchandise exports to low- and middle-income economies in Europe & Central Asia (% of total merchandise exports)	TX.VAL.MRCH.R2.ZS	1,71	1,68	1,07	1,12		6,23	5,92	5,83	

	Trade (% of GDP)	Government expenditure on education, total (% of GDP)	Gross capital formation (% of GDP)	...	Net lending (+) / net borrowing (-) (% of GDP)	Stocks traded, total value (% of GDP)
1970	30,09885	3,36681	26,00610			
1971	30,39609	2,89877	23,83427			
1972	31,82281		22,93538			
1973	34,06467		26,35899		-4,05517	
1974	40,80289	3,83514	29,77102		-3,68272	
1975	37,40045	3,71161	23,77739		-7,97296	0,71894
1976	41,19215	3,91952	26,59778		-5,48234	0,55892
1977	41,80956		24,44196		-4,54745	0,33618
1978	41,26819	3,78036	23,88776		-5,60589	0,62465
1979	43,71042	4,16373	24,42132		-7,16932	0,87907
1980	42,97266		26,76769		-8,69110	1,79648
1981	45,28204		24,69333			2,51916
1982	43,50829		23,73429			0,65235



Reproduce

Stop

Archive

Move

Tag

Charts

Panels

Code

Hyperparameters

Metrics

Graph Definition

Output

System Metrics

Installed Packages

Notes

Graphics

Audio

Text

Confusion Matrices

Histograms

Other

HTML

Assets & Artifacts

AssetsArtifacts

Search file or directory

File Name	Location	Size	Last Modified	Step	Context
images					
Trade in services (% of GDP).png	Local	34.64 KB	2/6 02:29 AM		
Trade (% of GDP).png	Local	35.56 KB	2/6 02:28 AM		
Total natural resources rents (% of GDP).png	Local	42.28 KB	2/6 02:28 AM		
Tax revenue (% of GDP).png	Local	31.75 KB	2/6 02:29 AM		
Stocks traded, total value (% of GDP).png	Local	31.35 KB	2/6 02:29 AM		
Services, value added (% of GDP).png	Local	28.6 KB	2/6 02:28 AM		
Revenue, excluding grants (% of GDP).png	Local	32.02 KB	2/6 02:29 AM		
Personal remittances, received (% of GDP).png	Local	32.08 KB	2/6 02:29 AM		
Oil rents (% of GDP).png	Local	37.64 KB	2/6 02:29 AM		
Net lending (+) / net borrowing (-) (% of GDP).png	Local	34.56 KB	2/6 02:29 AM		
Net investment in nonfinancial assets (% of GDP).png	Local	37.44 KB	2/6 02:28 AM		
Natural gas rents (% of GDP).png	Local	39.54 KB	2/6 02:29 AM		
Mineral rents (% of GDP).png	Local	27.87 KB	2/6 02:28 AM		

Add panel to project



Options

Query 1

Version History ▼

1

CHART PREVIEW

Panels Docs

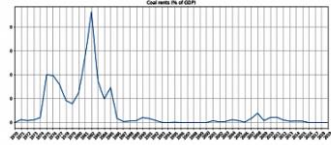
Show Images ✎

<> Edit Code


Static 🔴

Experiment: 6332ff8380e14643b45347b46eb963ca ▼

File: Coal rents (% of GDP).png



File: Net lending (+) / net borrowing (-) (% of GDP).png



File: Gross fixed capital formation (% of GDP).png

< Back

Show Images

Cancel

Reset

Done

Add panel to project



Options

Query 1

Version History ▼

1

```
"imageName": "Gross fixed capital formation (% of GDP).png"
```

2

3

CHART PREVIEW

Panels Docs


Show Images ✎

<> Edit Code

Static 🔴

Experiment: 6332ff8380e14643b45347b46eb963ca ▼

File: Gross fixed capital formation (% of GDP).png



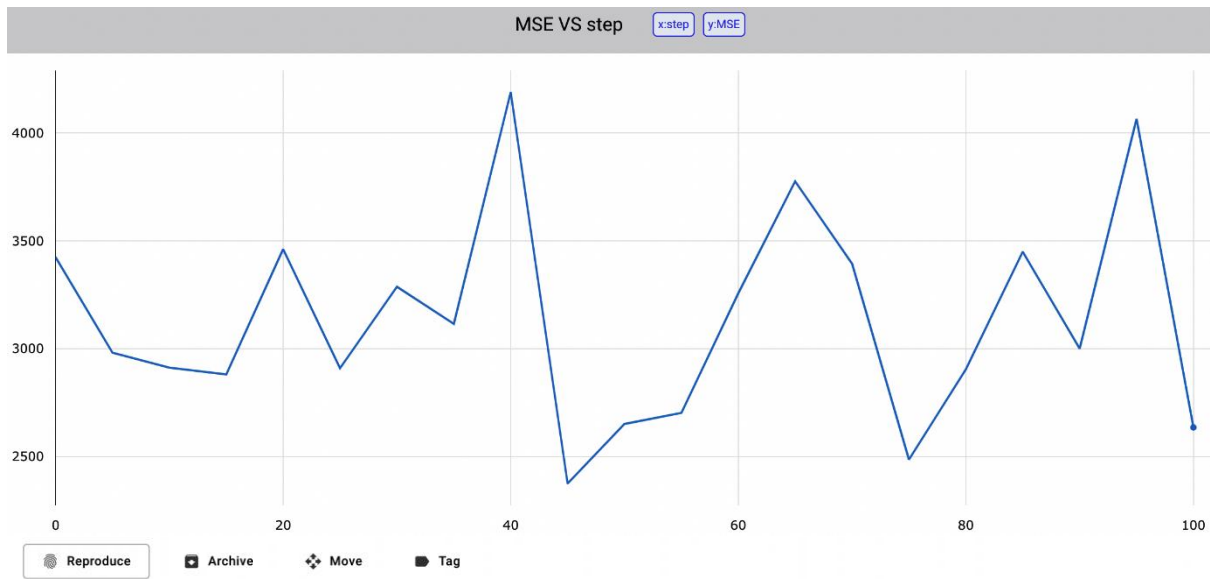
< Back

Show Images

Cancel

Reset

Done



Charts
Panels
Code
Hyperparameters

Metrics

Search metric name

Decimal Precision 13

Add Metric

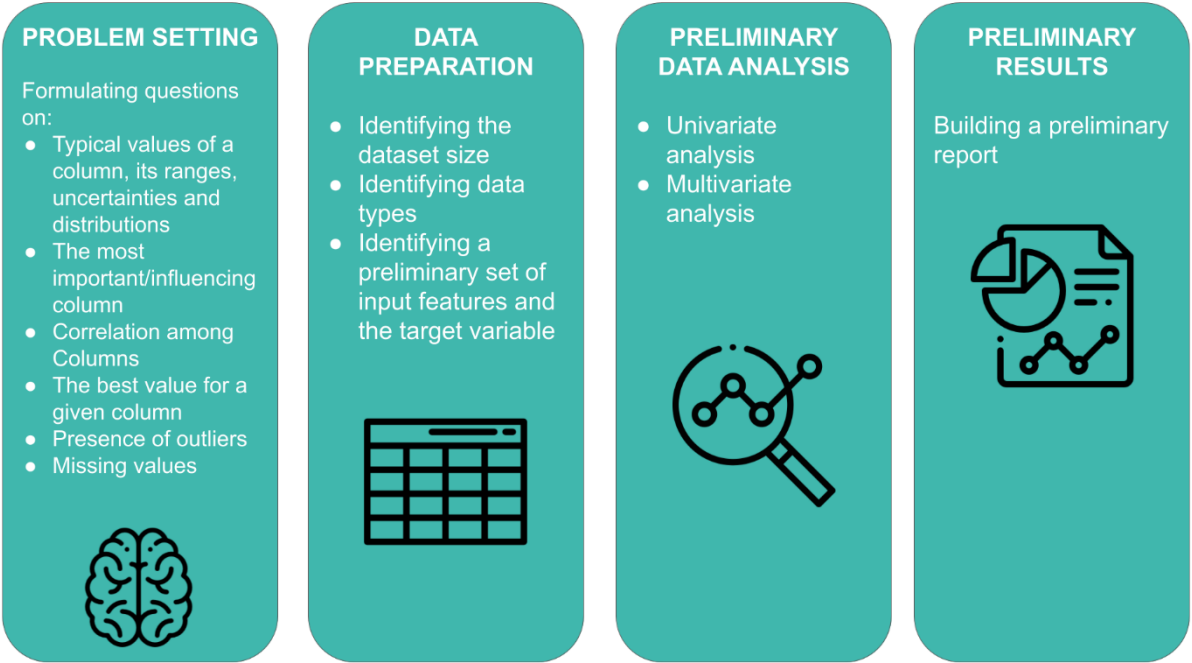
Name	Last			Min			Max		
	Value	Step	Time	Value	Step	Time	Value	Step	Time
MSE	2634.822	100	2/11/22 03:03 PM	2374.331	45	2/11/22 03:03 PM	4189.681	40	2/11/22 03:03 PM



Indicator Name	Indicator Code
Agriculture, forestry, and fishing, value added (% of GDP)	NV.AGR.TOTL.ZS
Broad money (% of GDP)	FM.LBL.BMNY.GD.ZS
Central government debt, total (% of GDP)	GC.DOD.TOTL.GD.ZS
Claims on other sectors of the domestic economy (% of GDP)	FS.AST.DOMO.GD.ZS
Coal rents (% of GDP)	NY.GDP.COAL.RT.ZS
Current account balance (% of GDP)	BN.CAB.XOKA.GD.ZS
Current health expenditure (% of GDP)	SH.XPD.CHEX.GD.ZS
Domestic credit provided by financial sector (% of GDP)	FS.AST.DOMS.GD.ZS
Domestic credit to private sector (% of GDP)	FS.AST.PRVT.GD.ZS
Domestic credit to private sector by banks (% of GDP)	FD.AST.PRVT.GD.ZS
Domestic general government health expenditure (% of GDP)	SH.XPD.GHED.GD.ZS
Expense (% of GDP)	GC.XPN.TOTL.GD.ZS
Exports of goods and services (% of GDP)	NE.EXP.GNFS.ZS
External balance on goods and services (% of GDP)	NE.RSB.GNFS.ZS
Final consumption expenditure (% of GDP)	NE.CON.TOTL.ZS
Foreign direct investment, net inflows (% of GDP)	BX.KLT.DINV.WD.GD.ZS
Foreign direct investment, net outflows (% of GDP)	BM.KLT.DINV.WD.GD.ZS
Forest rents (% of GDP)	NY.GDP.FRST.RT.ZS
General government final consumption expenditure (% of GDP)	NE.CON.GOVT.ZS

Government expenditure on education, total (% of GDP)	SE.XPD.TOTL.GD.ZS
Government expenditure per student, primary (% of GDP per capita)	SE.XPD.PRIM.PC.ZS
Government expenditure per student, secondary (% of GDP per capita)	SE.XPD.SECO.PC.ZS
Government expenditure per student, tertiary (% of GDP per capita)	SE.XPD.TERT.PC.ZS
Gross capital formation (% of GDP)	NE.GDI.TOTL.ZS
Gross domestic savings (% of GDP)	NY.GDS.TOTL.ZS
Gross fixed capital formation (% of GDP)	NE.GDI.FTOT.ZS
Gross fixed capital formation, private sector (% of GDP)	NE.GDI.FPRV.ZS
Gross national expenditure (% of GDP)	NE.DAB.TOTL.ZS
Gross savings (% of GDP)	NY.GNS.ICTR.ZS
Households' and NPISHs' final consumption expenditure (% of GDP)	NE.CON.PRVT.ZS
Imports of goods and services (% of GDP)	NE.IMP.GNFS.ZS
Industry (including construction), value added (% of GDP)	NV.IND.TOTL.ZS
Manufacturing, value added (% of GDP)	NV.IND.MANF.ZS
Market capitalization of listed domestic companies (% of GDP)	CM.MKT.LCAP.GD.ZS
Merchandise trade (% of GDP)	TG.VAL.TOTL.GD.ZS
Military expenditure (% of GDP)	MS.MIL.XPND.GD.ZS
Mineral rents (% of GDP)	NY.GDP.MINR.RT.ZS
Natural gas rents (% of GDP)	NY.GDP.ENGAS.RT.ZS
Net acquisition of financial assets (% of GDP)	GC.AST.TOTL.GD.ZS
Net incurrence of liabilities, total (% of GDP)	GC.LBL.TOTL.GD.ZS
Net investment in nonfinancial assets (% of GDP)	GC.NFN.TOTL.GD.ZS
Net lending (+) / net borrowing (-) (% of GDP)	GC.NLD.TOTL.GD.ZS
Oil rents (% of GDP)	NY.GDP.PETR.RT.ZS
Personal remittances, received (% of GDP)	BX.TRF.PWKR.DT.GD.ZS
Research and development expenditure (% of GDP)	GB.XPD.RSDV.GD.ZS
Revenue, excluding grants (% of GDP)	GC.REV.XGRT.GD.ZS
Services, value added (% of GDP)	NV.SRV.TOTL.ZS
Stocks traded, total value (% of GDP)	CM.MKT.TRAD.GD.ZS
Tax revenue (% of GDP)	GC.TAX.TOTL.GD.ZS
Total natural resources rents (% of GDP)	NY.GDP.TOTL.RT.ZS
Trade (% of GDP)	NE.TRD.GNFS.ZS
Trade in services (% of GDP)	BG.GSR.NFSV.GD.ZS

Chapter 2: Exploratory Data Analysis in Comet



Overview

Overview

Alerts 59

Reproduction

Dataset statistics		Variable types	
Number of variables	35	Categorical	19
Number of observations	119390	Numeric	15
Missing cells	129425	DateTime	1
Missing cells (%)	3.1%		
Duplicate rows	17		
Duplicate rows (%)	< 0.1%		
Total size in memory	31.9 MiB		
Average record size in memory	280.0 B		

Overview

Overview

Alerts

59

Reproduction

Alerts

Dataset has 17 (< 0.1%) duplicate rows	Duplicates
country has a high cardinality: 177 distinct values	High cardinality
reservation_status_date has a high cardinality: 926 distinct values	High cardinality
arrival_date_year is highly correlated with arrival_date_week_number and 1 other fields	High correlation
arrival_date_week_number is highly correlated with arrival_date_year and 1 other fields	High correlation
is_repeated_guest is highly correlated with previous_bookings_not_canceled	High correlation
previous_bookings_not_canceled is highly correlated with is_repeated_guest	High correlation
arrival_date_month_number is highly correlated with arrival_date_year and 1 other fields	High correlation

arrival_date_month

Categorical

HIGH CORRELATION
HIGH CORRELATION

Distinct	12
Distinct (%)	< 0.1%
Missing	0
Missing (%)	0.0%
Memory size	932.9 KiB

August	13877
July	12661
May	11791
October	11160
April	11089
Other values (7)	58812

Toggle details

Overview

Categories

Words

Characters

Length

Max length	9
Median length	6
Mean length	5.903182846
Min length	3

Characters and Unicode

Total characters	0
Distinct characters	0
Distinct categories	0 ?
Distinct scripts	0 ?
Distinct blocks	0 ?

Unique

Unique	0 ?
Unique (%)	0.0%

Sample

1st row	July
2nd row	July
3rd row	July
4th row	July
5th row	July

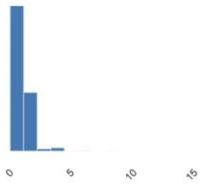
stays_in_weekend_nights

Real number (ℝ_{≥0})

HIGH CORRELATION
ZEROS

Distinct	17
Distinct (%)	< 0.1%
Missing	0
Missing (%)	0.0%
Infinite	0
Infinite (%)	0.0%
Mean	0.9275986264

Minimum	0
Maximum	19
Zeros	51998
Zeros (%)	43.6%
Negative	0
Negative (%)	0.0%
Memory size	932.9 KiB



Toggle details

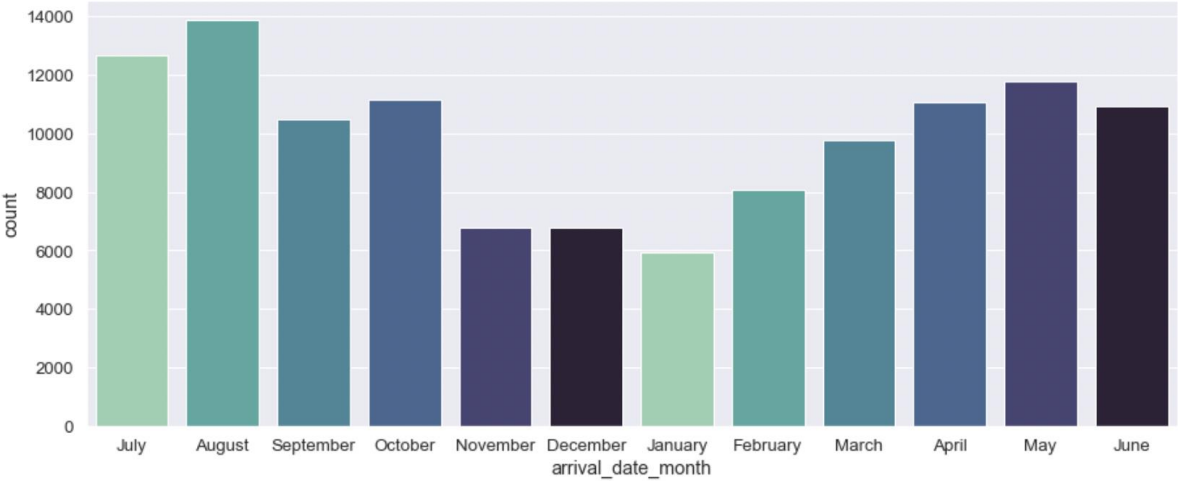
Statistics Histogram Common values Extreme values

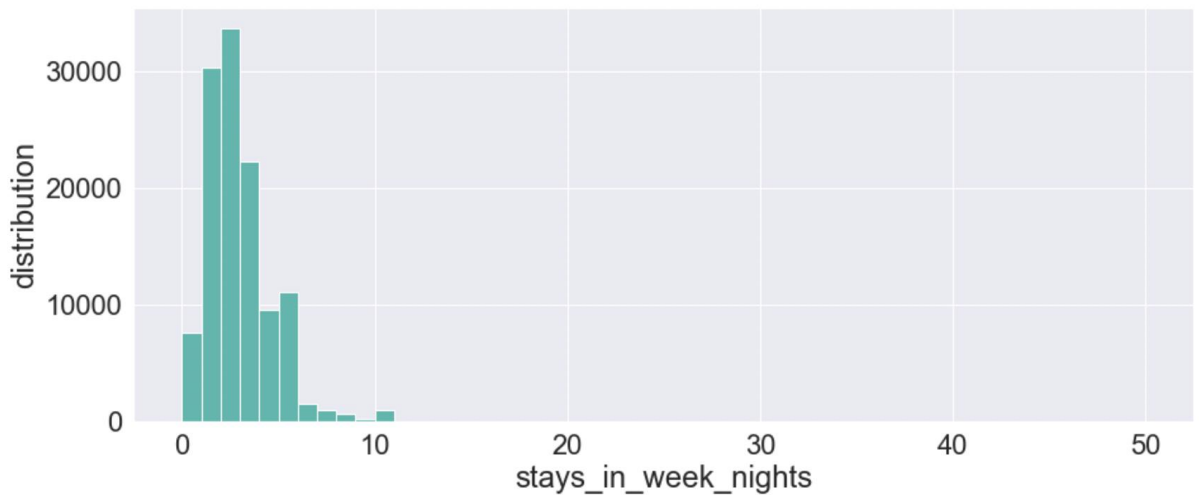
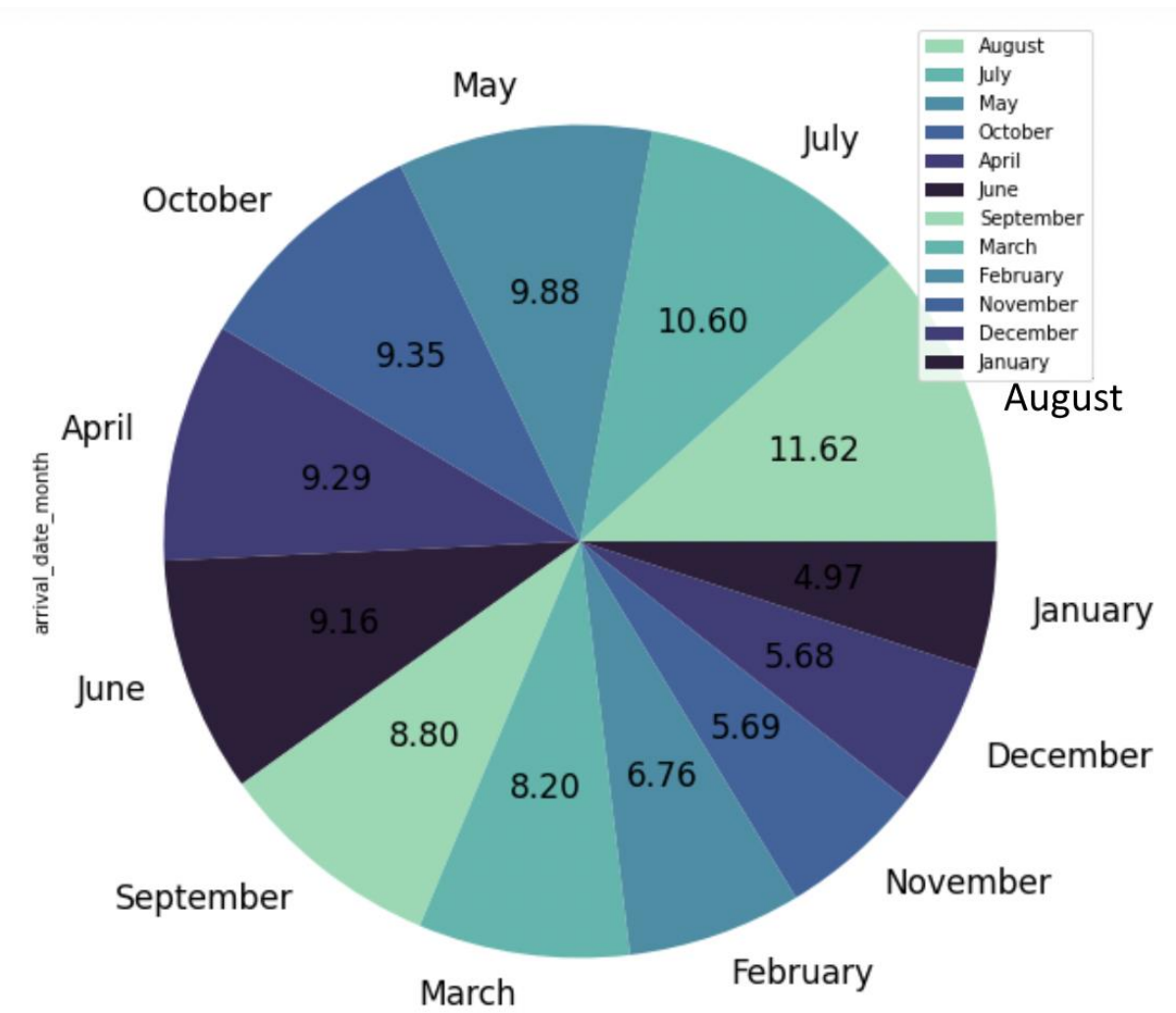
Quantile statistics

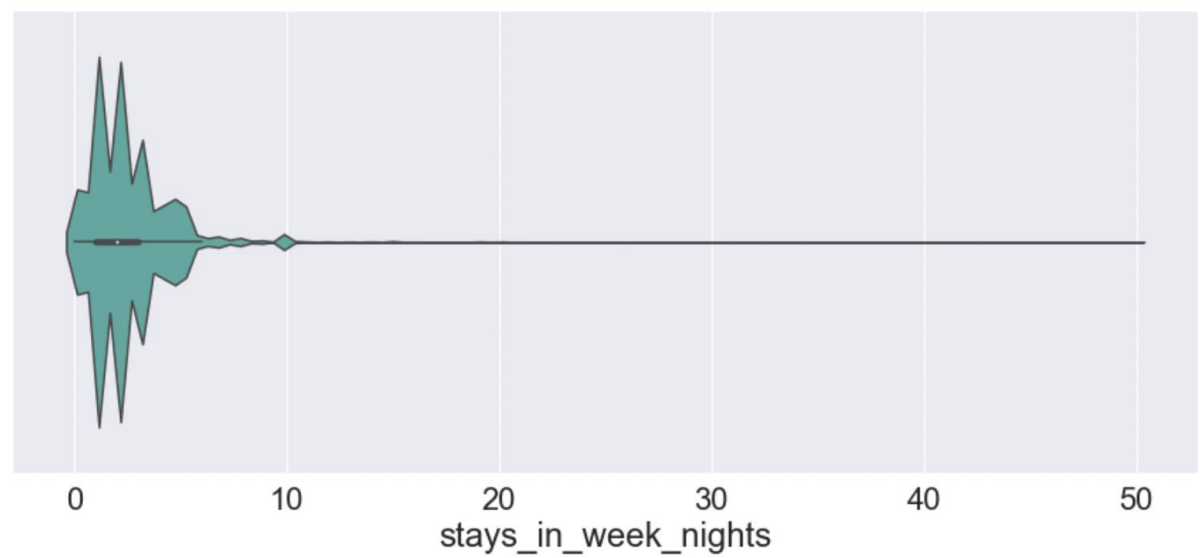
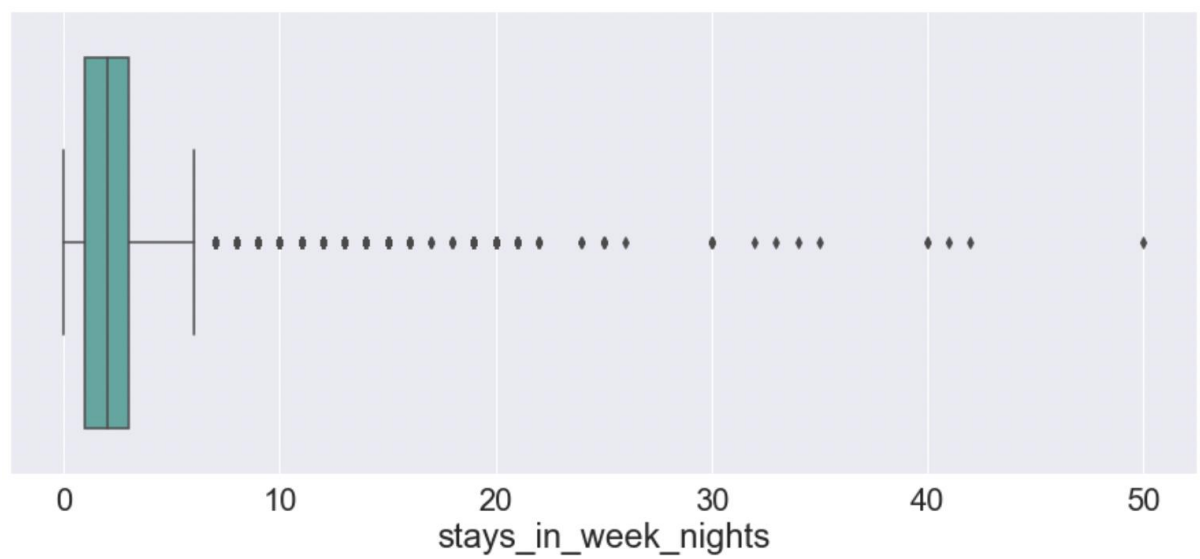
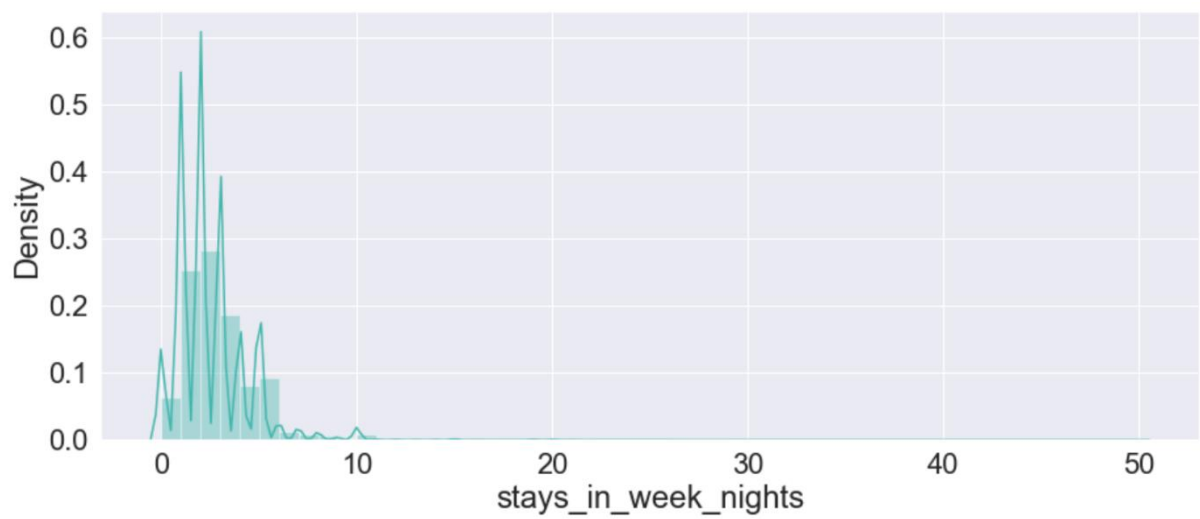
Minimum	0
5-th percentile	0
Q1	0
median	1
Q3	2
95-th percentile	2
Maximum	19
Range	19
Interquartile range (IQR)	2

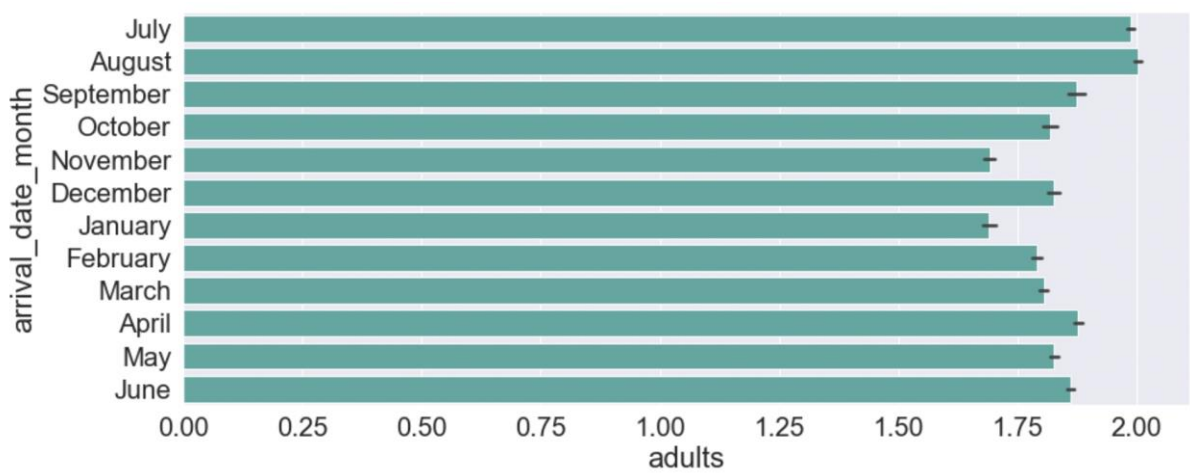
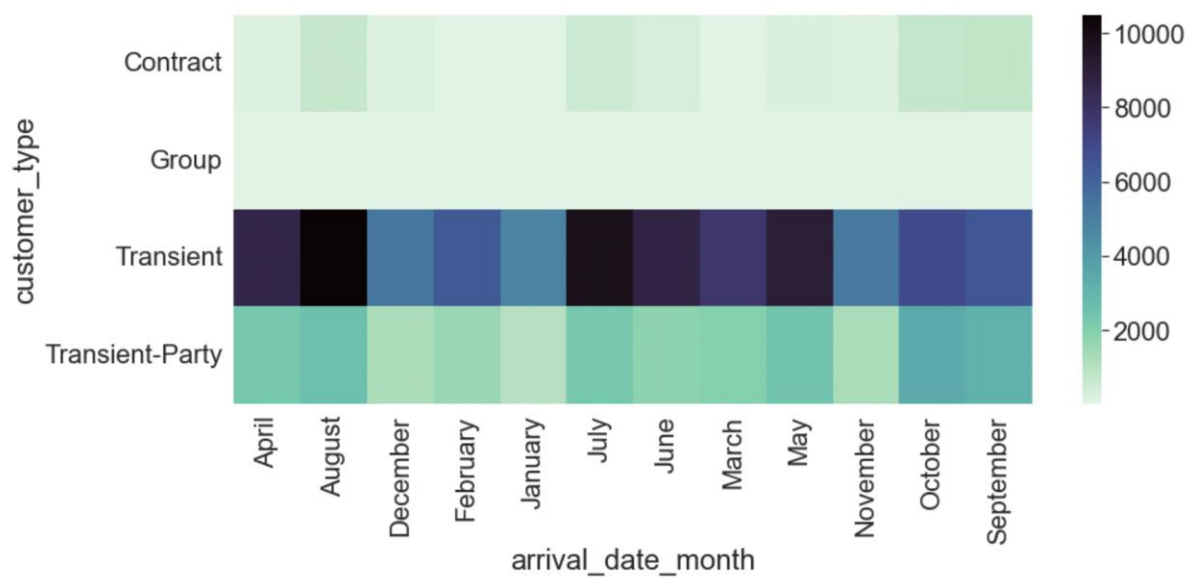
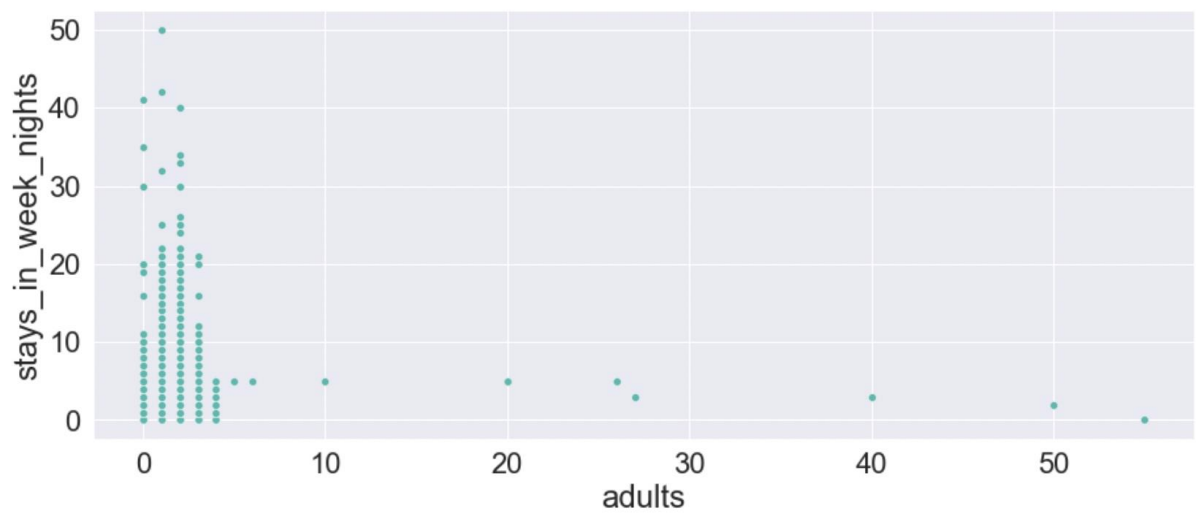
Descriptive statistics

Standard deviation	0.9986134946
Coefficient of variation (CV)	1.076557755
Kurtosis	7.174066064
Mean	0.9275986264
Median Absolute Deviation (MAD)	1
Skewness	1.38004645
Sum	110746
Variance	0.9972289116
Monotonicity	Not monotonic









Summarize dataset: 100% 124/124 [00:09<00:00, 12.44it/s, Completed]

Generate report structure: 100% 1/1 [00:02<00:00, 2.50s/it]

Render HTML: 100% 1/1 [00:01<00:00, 1.99s/it]

Assets Artifacts

Search file or directory



File Name ↓

Location

Size

Last Modified

Step

Context

dataframes

hotel_bookings.json

Local

48.89 MB

8 minutes ago

hotel_bookings-profile.html

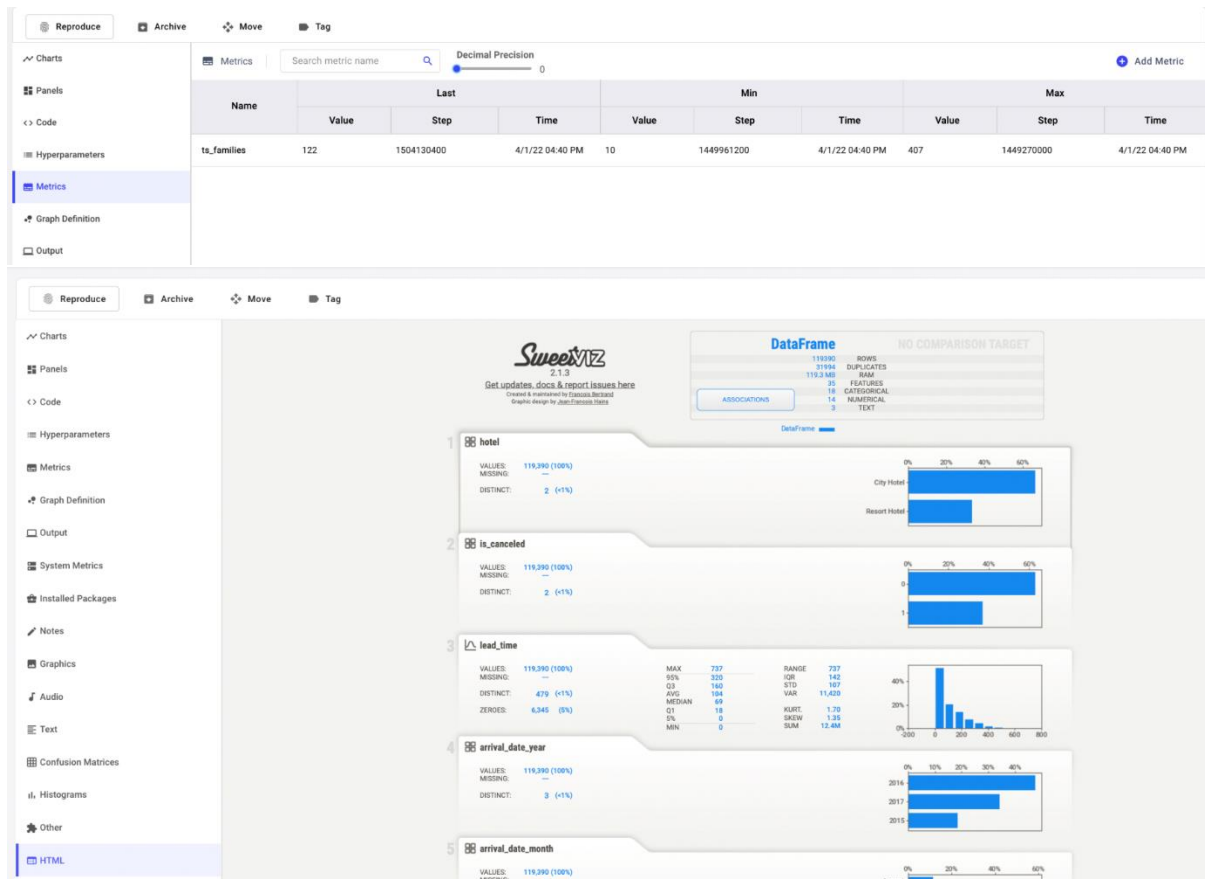
Local

11.39 MB

8 minutes ago

notebooks

source-code



PANEL NAME

New custom panel

Default Size:

2x1

Language:

Python

Settings:

☒ Private

☐ Public

This is a BETA version of Python panels

Panels Docs

Code

Options

Description

Filters 25

```

1 # Comet Python Panels BETA, full documentation available at:
2 # https://www.comet.ml/docs/user-interface/python-panels/overview/
3
4 from comet_ml import API, ui
5 import matplotlib.pyplot as plt
6
7 # Get available metrics
8 api = API()
9 metrics = api.get_panel_metrics_names()
10
11 # Make chart interactive by adding a dropdown menu
12 selected_metric = ui.dropdown('Select a metric:', metrics)
13
14 # Use API to fetch the metric data for all experiments in the panel
    
```

To run this panel, press the green play button in the top right corner of the code editor

Console

Clear

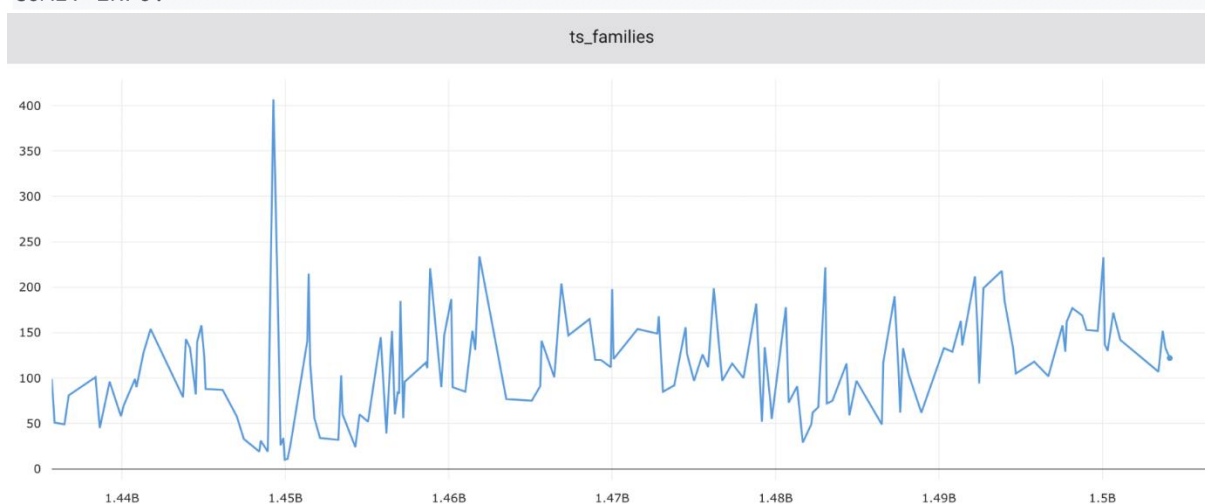
Cancel

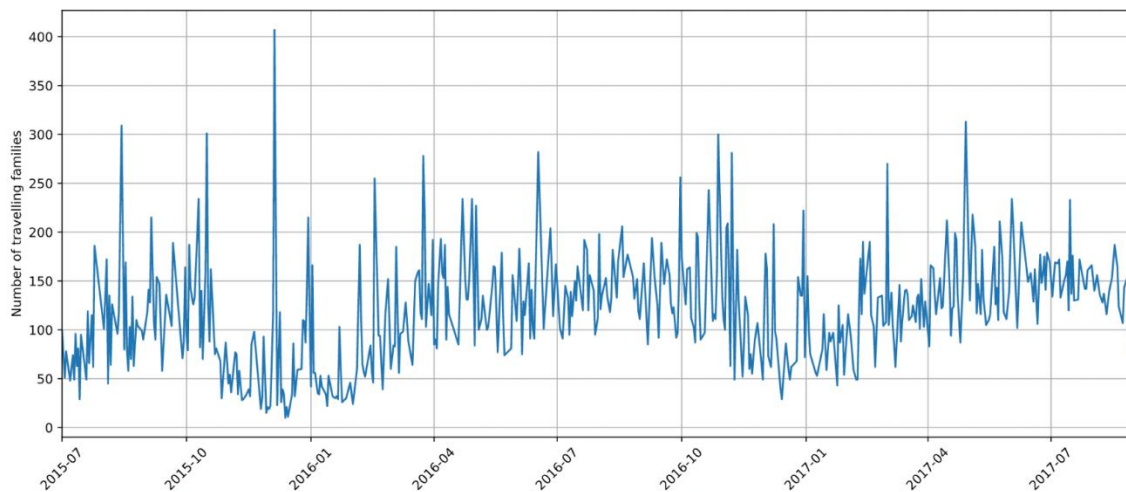
Save & Capture Thumbnail

COMET INFO: Experiment is live on comet.ml <https://www.comet.ml/alod83/first-use-case/55d3cb865a614e6485b26c6064abe4e2>

COMET INFO: -----
 COMET INFO: Comet.ml Experiment Summary
 COMET INFO: -----
 COMET INFO: Data:
 COMET INFO: display_summary_level : 1
 COMET INFO: url : <https://www.comet.ml/alod83/first-use-case/55d3cb865a614e6485b26c6064abe4e2>
 COMET INFO: Uploads:
 COMET INFO: environment details : 1
 COMET INFO: filename : 1
 COMET INFO: images : 37
 COMET INFO: installed packages : 1
 COMET INFO: notebook : 1
 COMET INFO: source_code : 1
 COMET INFO: -----

The Experiment Key





Report Name

Add description text/markdown...



HEADING

When editing a report, click here to edit this section:

1. Edit Heading and this text
2. Add Panels
3. Select particular Experiments for Panels

▼ Panels

☒ Auto Refresh

▼ Experiments

All experiments Add filter

Save Filter Clear All

Showing 1-1 of 1 total experiments

[Show](#)
[Hide](#)
[Group by](#)
[Customize columns](#)

<input type="checkbox"/> NAME	STATUS	TAGS	SERVER END TIME	FILE NAME	DURATION
<input type="checkbox"/> ● parallel_pigment_3820	✓		2/23/22 09:38 AM	Jupyter interactive	00:00:22

☒ Freeze table data ⓘ
 |< < Showing 1-1 ▾ of 1 > >|

Add text/markdown...

Add panel to project



BUILT-IN 4 FEATURED 24 WORKSPACE 1 PUBLIC 173 [+ Create New](#)

Panels Docs

24 panels

Sort By [Last Saved](#) ▾

[HTML](#)

Write the text HTML
in the search box



▲
17
▼



PDF Viewer

Last saved: Oct 19, 21 by dsblank

A general PDF Viewer. Simply change the pdf_url to point to the PDF that you would like to view. Authors: * Doug Blank...



[Add >](#)

▲
5
▼



HTML Asset Viewer

Last saved: Oct 19, 21 by dsblank

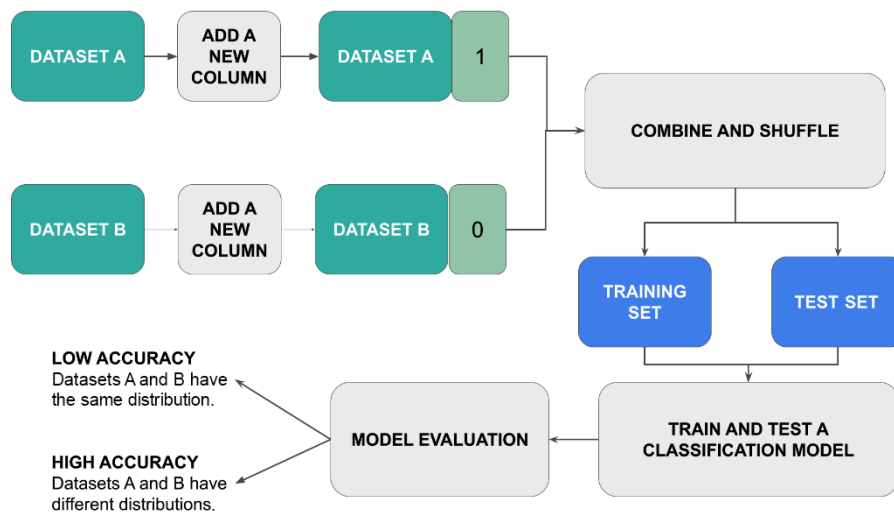
HTML Asset Viewer Log an HTML file or text using the Comet Python SDK, and use this Custom Comet Panel to view it. For...



[Add >](#)

Column Name	Column Value
hotel	Resort Hotel
is_canceled	0
lead_time	342
arrival_date_year	2015
arrival_date_month	July
arrival_date_week_number	27
arrival_date_day_of_month	1
stays_in_weekend_nights	0
stays_in_week_nights	0
adults	2
children	0
babies	0
meal	BB
country	PRT
market_segment	Direct
distribution_channel	Direct
is_repeated_guest	0
previous_cancellations	0
previous_bookings_not_canceled	0
reserved_room_type	C
assigned_room_type	C
booking_changes	3
deposit_type	No Deposit
agent	NULL
company	NULL
days_in_waiting_list	0
customer_type	Transient
adr	0
required_car_parking_spaces	0
total_of_special_requests	0
reservation_status	Check-Out
reservation_status_date	2015-07-01

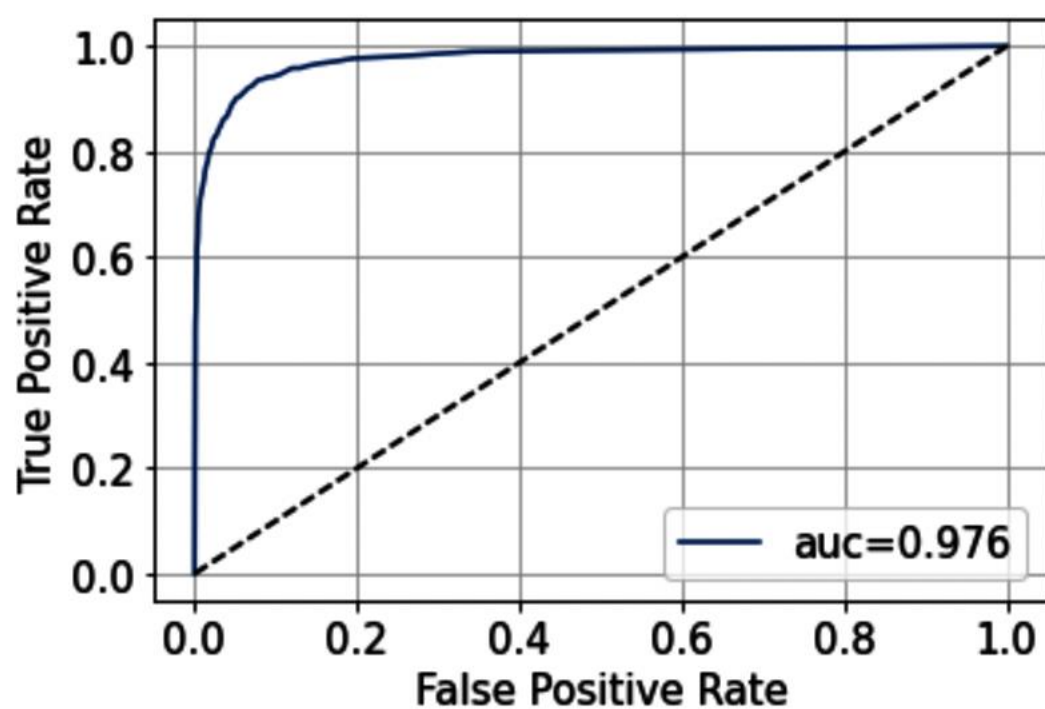
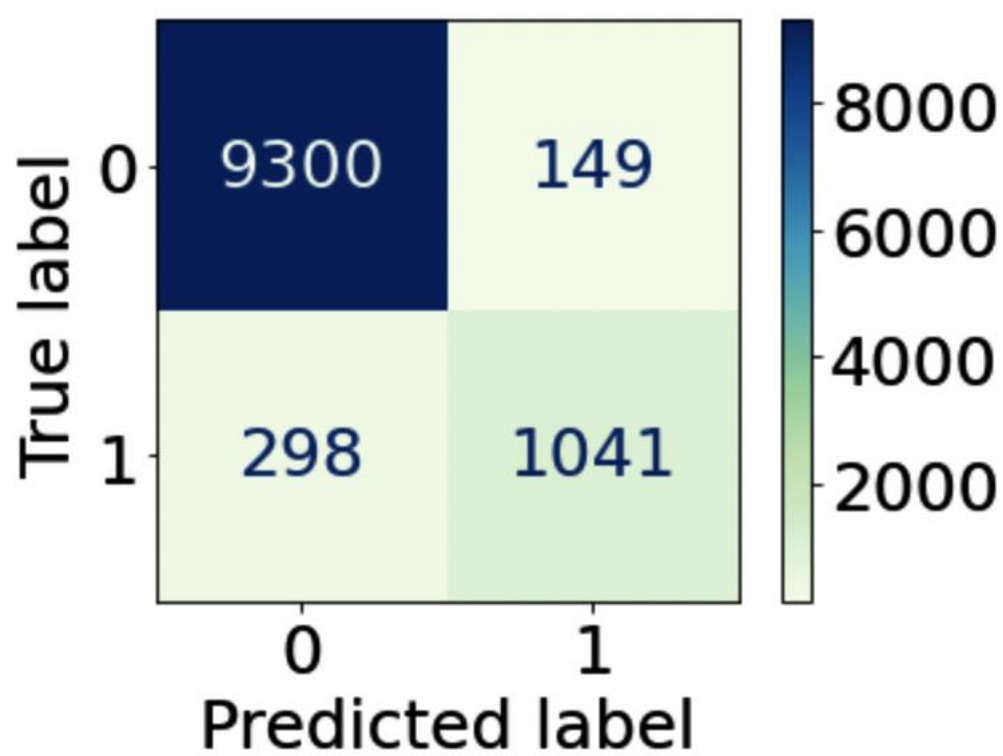
Chapter 3: Model Evaluation in Comet

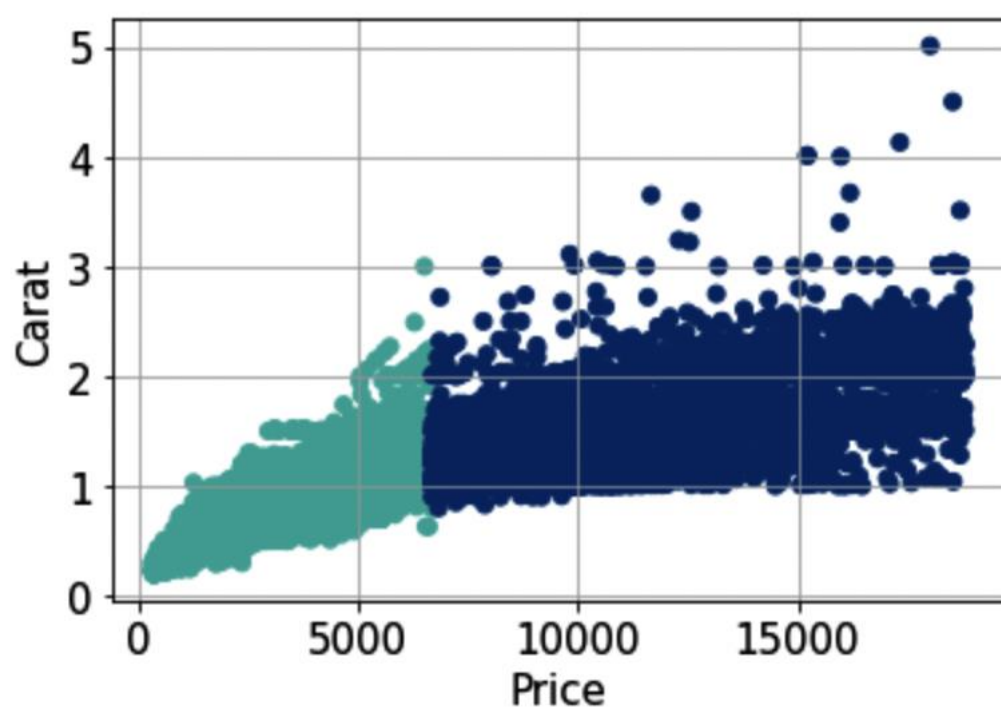
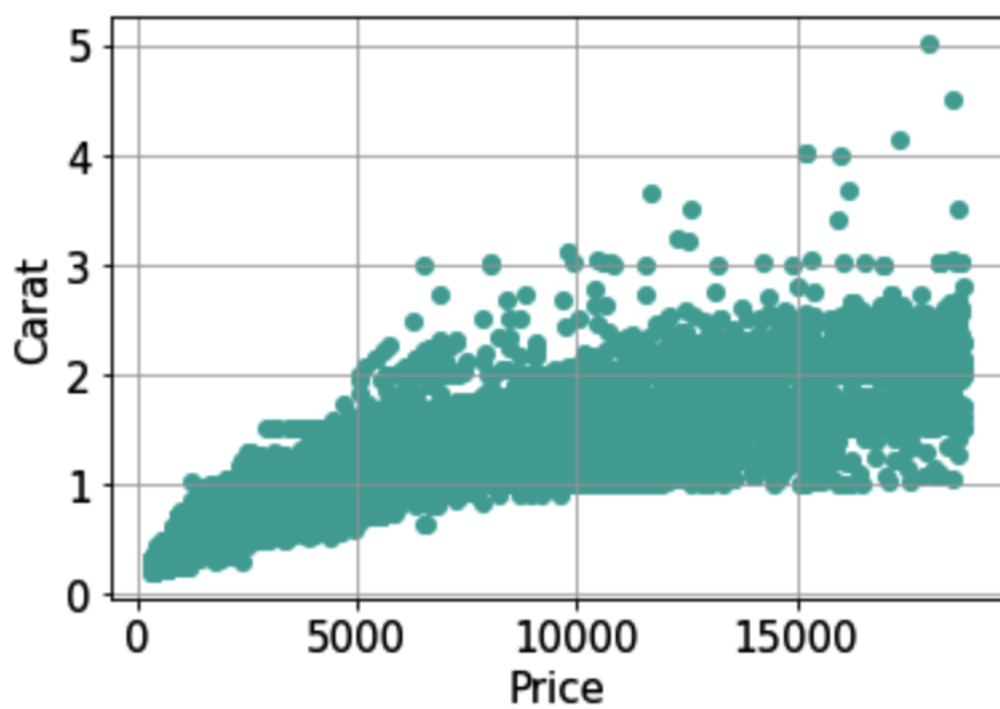


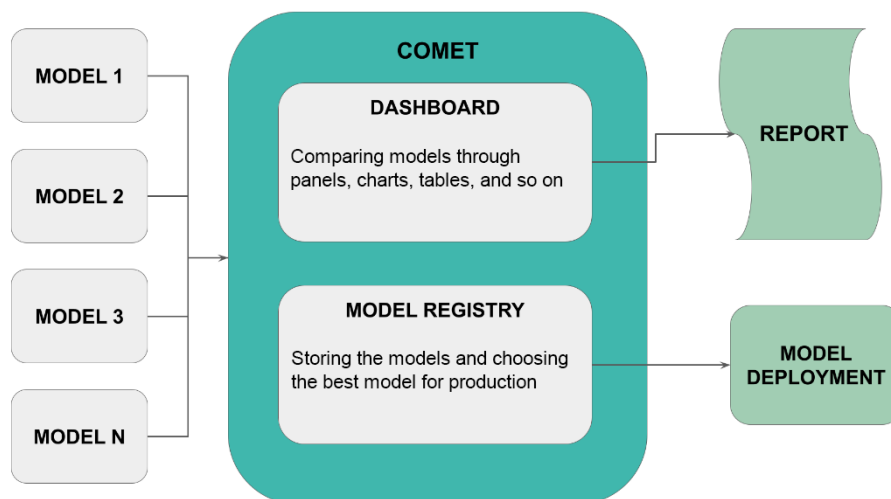
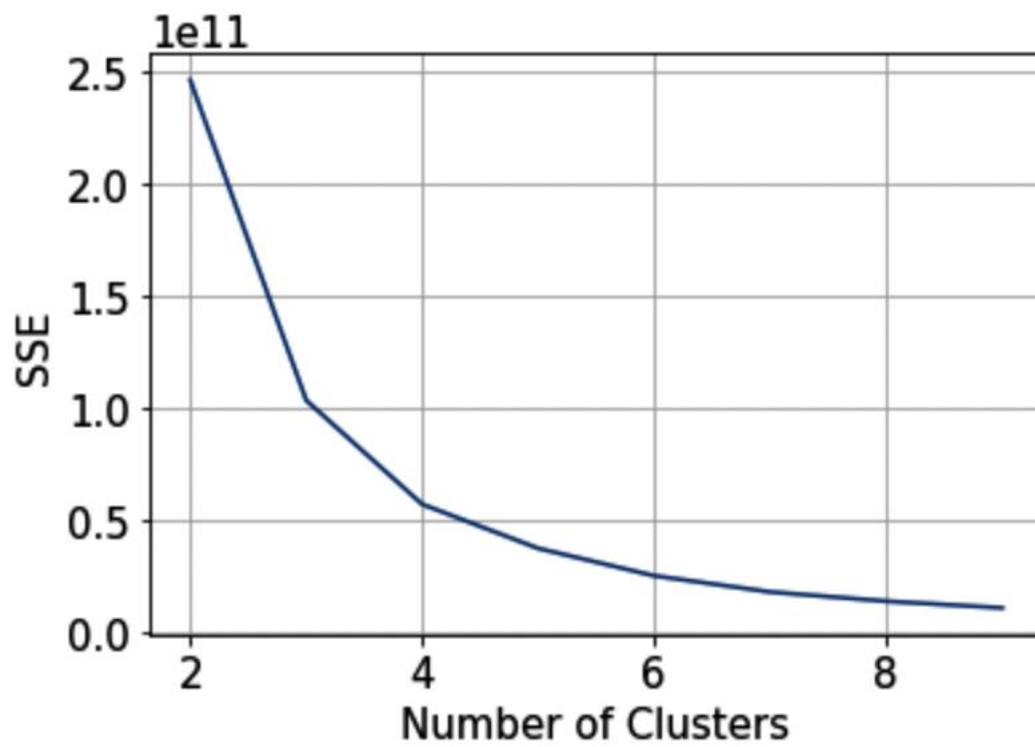
Unnamed: 0	carat	cut	color	clarity	depth	table	price	x	y	z
1	0.23	Ideal	E	SI2	61.5	55	326	3.95	3.98	2.43
2	0.21	Premium	E	SI1	59.8	61	326	3.89	3.84	2.31
3	0.23	Good	E	VS1	56.9	65	327	4.05	4.07	2.31
4	0.29	Premium	I	VS2	62.4	58	334	4.2	4.23	2.63
5	0.31	Good	J	SI2	63.3	58	335	4.34	4.35	2.75
6	0.24	Very Good	J	VVS2	62.8	57	336	3.94	3.96	2.48
7	0.24	Very Good	I	VVS1	62.3	57	336	3.95	3.98	2.47
8	0.26	Very Good	H	SI1	61.9	55	337	4.07	4.11	2.53
9	0.22	Fair	E	VS2	65.1	61	337	3.87	3.78	2.49
10	0.23	Very Good	H	VS1	59.4	61	338	4	4.05	2.39

ACTUAL VALUES

		Positive	Negative
PREDICTED VALUES	Positive	TRUE POSITIVES	FALSE POSITIVES
	Negative	FALSE NEGATIVES	TRUE NEGATIVES







Experiments



↑≡ (2)

≡≡ (5)



All

Selected

Hidden



NAME



KNeighborsClassifier



GaussianNB



DecisionTreeClassifier



RandomForest

Experiments



↑≡ (2)

≡≡ (5)



Experiments



↑ (1)



(5)



Sort

[Reset to default](#)

Server end time



train_warm_start

params

train_weights

params

user_name

metadata

validate_accuracy

metrics

validate_f1-score

metrics



Experiments



(1)



(6)



All

Selected

Hidden



NAME



RandomForest



DecisionTreeClassifier



KNeighborsClassifier



GaussianNB

Experiments



Filters



Sort (2)



Columns (15)



Group by

All

Selected

Hidden



NAME

TAGS

SERVER END TIME ↓

FILE NAME

DURATION



KNeighborsClassifier

KNeighborsClassifier

3/11/22 02:26 PM

Jupyter interactive

00:00:02



GaussianNB

GaussianNB

3/11/22 02:25 PM

Jupyter interactive

00:00:01



DecisionTreeClassifier

DecisionTreeClassifi ...

3/11/22 02:25 PM

Jupyter interactive

00:00:02



RandomForest


RandomForest

3/11/22 02:25 PM

Jupyter interactive

00:00:08

Customize Columns

 You can drag and drop columns to sort them in the table

Name

Tags ✕

Server end time ✕

File name ✕

Duration ✕

user_name ✕

f ✕

train_precision ✕

train_accuracy ✕

train_f1-score ✕

train_recall ✕

validate_f1-score ✕

validate_precision ✕

validate_accuracy ✕

validate_recall ✕

✕

▼

Reset default

Clear changes

Done

Experiments  Filters  Sort (1)  Columns (6)  Group by

All Selected Hidden

<input type="checkbox"/> NAME	VALIDATE_ACCUR... ↓	VALIDATE_PRECISION	VALIDATE_RECALL	VALIDATE_F1-SCORE	DURATION
<input type="checkbox"/>  RandomForest	0.957	0.872	0.772	0.819	00:00:10
<input type="checkbox"/>  DecisionTreeClassifier	0.942	0.762	0.777	0.769	00:00:04
<input type="checkbox"/>  KNeighborsClassifier	0.929	0.794	0.587	0.675	00:00:04
<input type="checkbox"/>  GaussianNB	0.904	0.66	0.481	0.557	00:00:01

Experiments

 Filters

 Sort (1)

 Columns (5)

 Group by

All Selected Hidden

<input type="checkbox"/> NAME	VALIDATE_ACCUR... ↓	VALIDATE_PRECISION	VALIDATE_RECALL	VALIDATE_F1-SCORE
▶ Duration: 00:00:01				
▼ Duration: 00:00:04				
<input type="checkbox"/>  DecisionTreeClassifier	0.942	0.762	0.777	0.769
<input type="checkbox"/>  KNeighborsClassifier	0.929	0.794	0.587	0.675
▶ Duration: 00:00:10				

Experiments

 Filters

 Sort (1)

 Columns (6)

 Group by

<div> <div>All</div> <div>Selected</div> <div>Hidden</div> </div>					
<input type="checkbox"/> NAME	VALIDATE_ACCUR... ↓	VALIDATE_PRECISION	VALIDATE_RECALL	VALIDATE_F1-SCORE	DURATION
<input type="checkbox"/> RandomForest	0.957	0.872	0.772	0.819	00:00:10
<input type="checkbox"/> DecisionTreeClassifier	0.942	0.762	0.777	0.769	00:00:04
<input type="checkbox"/> KNeighborsClassifier	0.929	0.794	0.587	0.675	00:00:04

Assets Artifacts

Search file or directory



File Name ↓

Location

Size

Last Modified

Step

Context

▸ confusion-matrices

▸ curves

▾ models

▾ RandomForest

Register

RandomForest.pkl

Local

23.39 MB

a few seconds ago

train

▸ notebooks

▸ source-code

▸ curves

▾ models

▾ RandomForest

▸ notebooks

▸ source-code

Register Model

RandomForest

Version

1.0.0

Description

Enter description

Public Private

Back

Save

Your model will be named randomforest

Projects

3

Model Registry

1

Artifacts

0

Filter (0) ▾

Search Model Registry



diamonds-classifier

Private



3 Versions



6 minutes ago

View model

^ 1.0.0

alod83

03/15/2022

03/15/2022

d952fe2ed

🔗 ⬇️ ✕

Experiment
d952fe2ed >

Stage

production

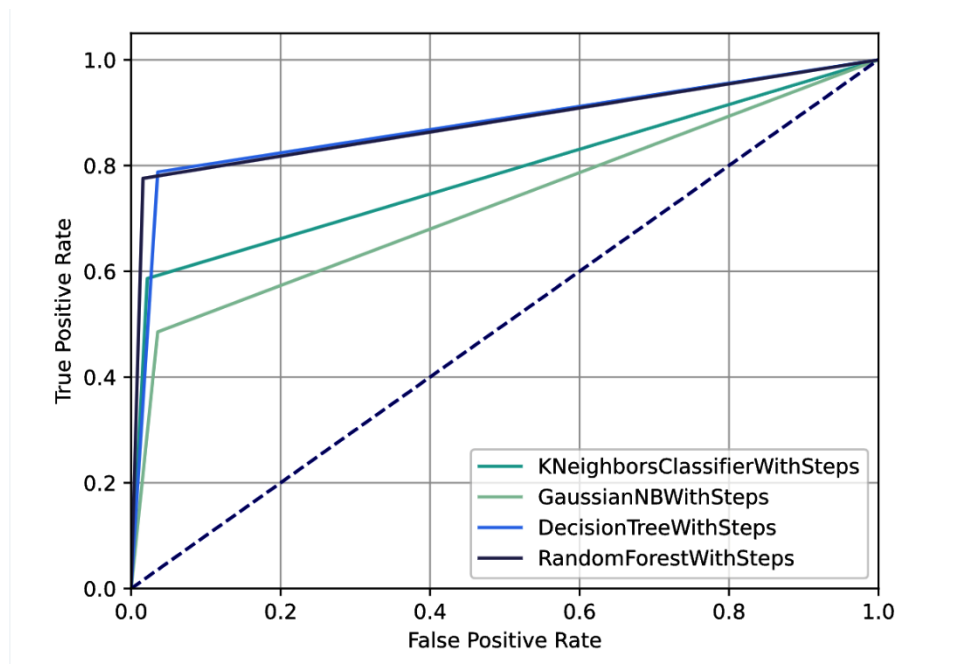


Create 'production'

Changes

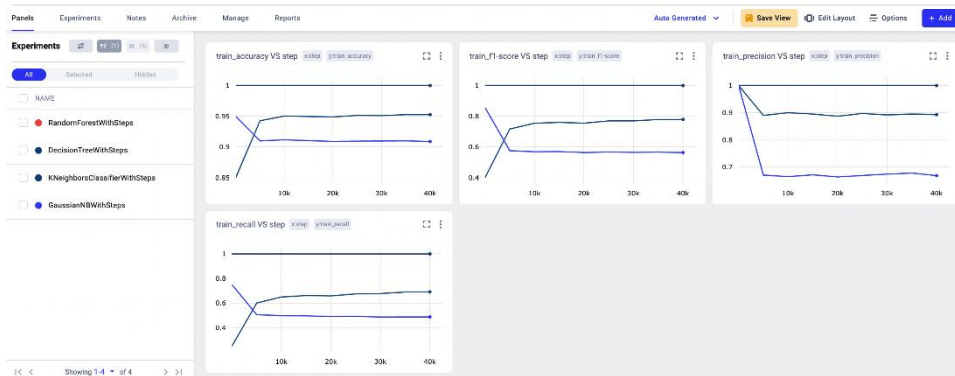
Enter changes

Update

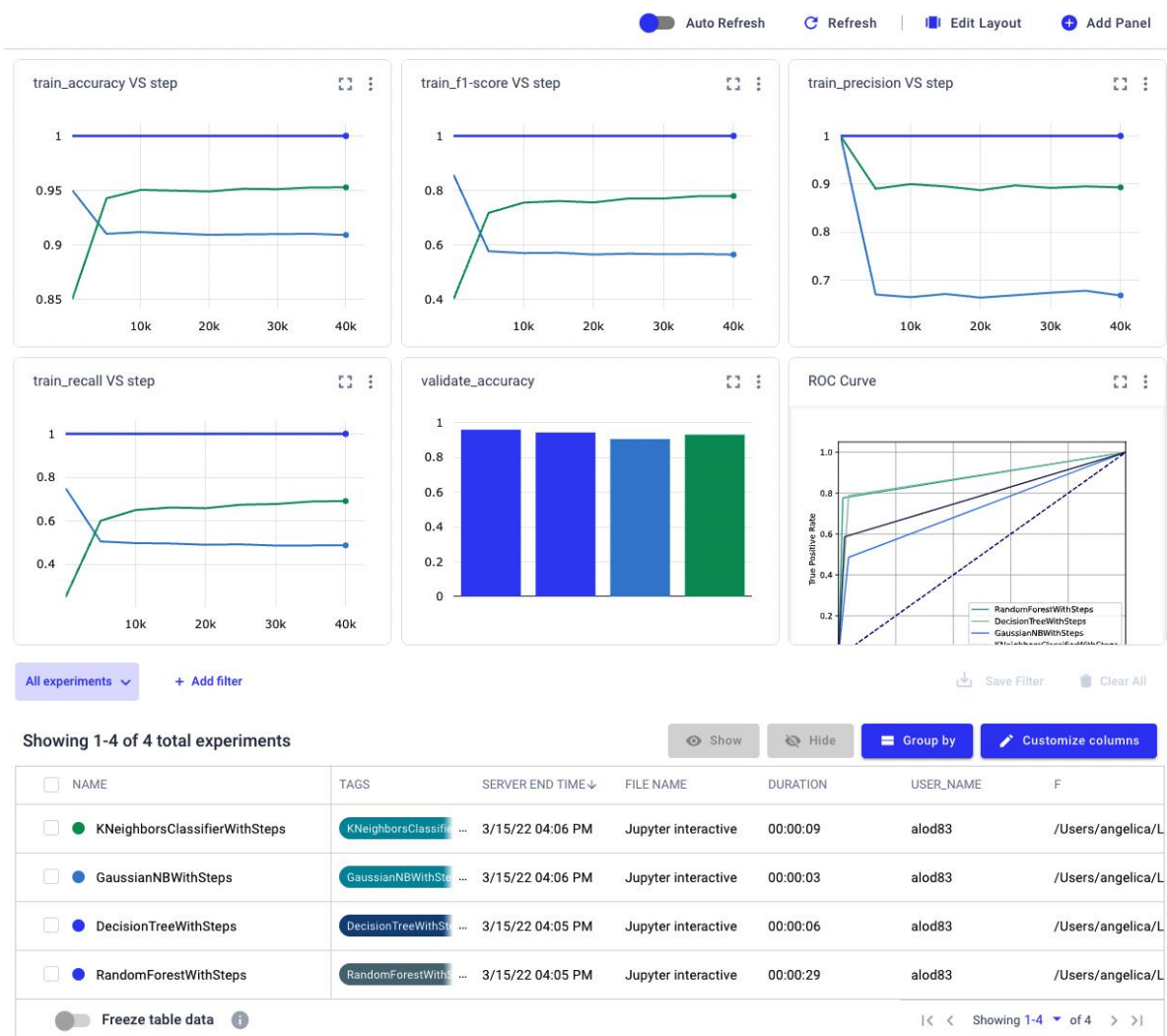


Model	Precision	Recall
Model 1	0.95	0.36
Model 2	0.82	0.94
Model 3	0.83	0.85
Model 4	0.78	0.95

Model	Precision	Recall	Combined Metric
Model 1	0.95	0.36	0.773
Model 2	0.82	0.94	0.856
Model 3	0.83	0.85	0.836
Model 4	0.78	0.95	0.831



Evaluation Metrics



Chapter 4: Workspaces, Projects, Experiments, and Models

Add Collaborators

Invite by email

Enter email

Add

Username

alod83

Role



Member

Admin

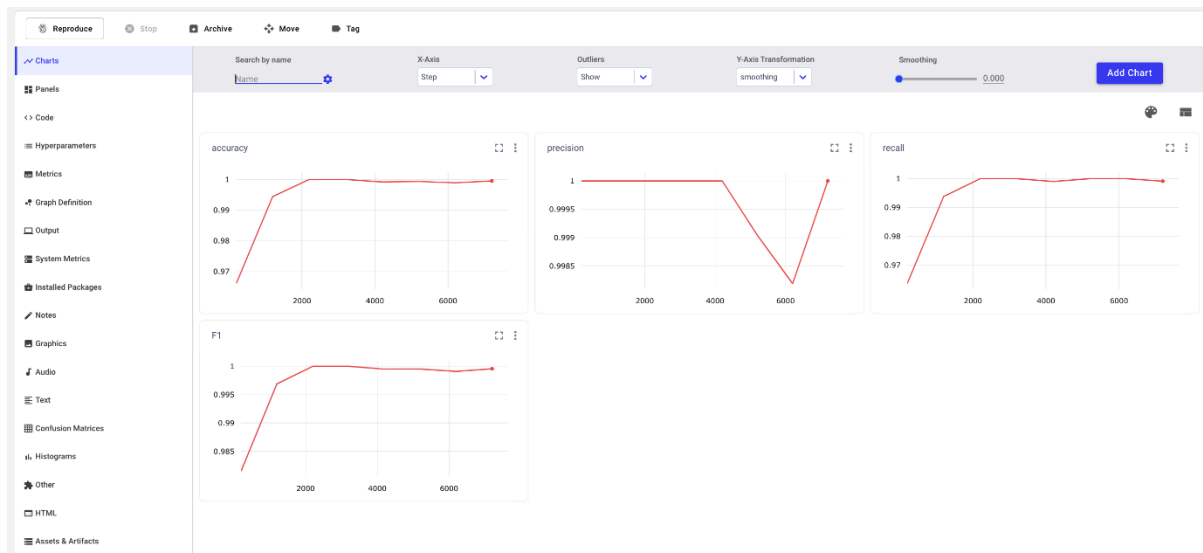
Member

Add

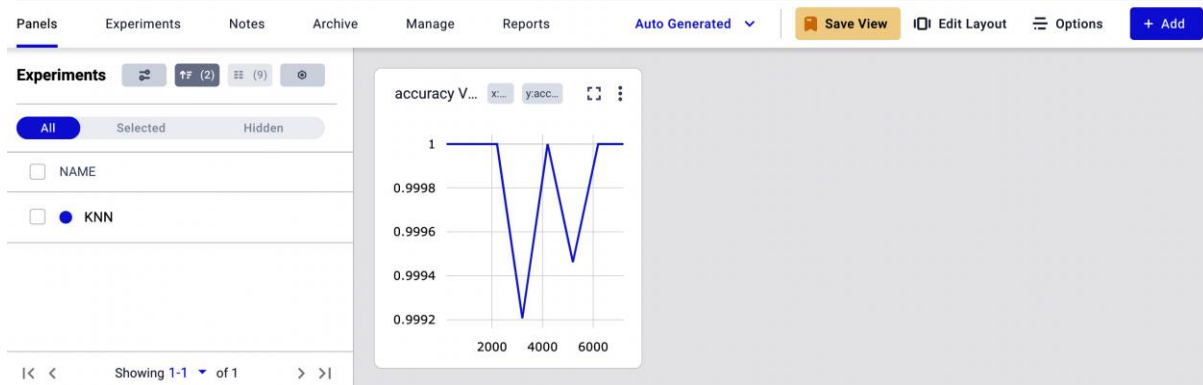
Invite

 pandas-profiles  03/01/2022 02/23/2022 alod83 0 

class	cap-shape	cap-surface	cap-color	bruises	odor	gill-attachment	gill-spacing	gill-size	gill-color	stalk-shape	stalk-root	stalk-surface-above-ring	stalk-surface-below-ring	stalk-color-above-ring	stalk-color-below-ring	veil-type	veil-color	ring-number	ring-type	spore-print-color	population	habitat
p	x	s	n	t	p	f	c	n	k	e	e	s	s	w	w	p	w	o	p	k	s	u
e	x	s	y	t	a	f	c	b	k	e	c	s	s	w	w	p	w	o	p	n	n	g
e	b	s	w	t	l	f	c	b	n	e	c	s	s	w	w	p	w	o	p	n	n	m
p	x	y	w	t	p	f	c	n	n	e	e	s	s	w	w	p	w	o	p	k	s	u
e	x	s	g	f	n	f	w	b	k	t	e	s	s	w	w	p	w	o	e	n	a	g
e	x	y	y	t	a	f	c	b	n	e	c	s	s	w	w	p	w	o	p	k	n	g
e	b	s	w	t	a	f	c	b	g	e	c	s	s	w	w	p	w	o	p	k	n	m
e	b	y	w	t	l	f	c	b	n	e	c	s	s	w	w	p	w	o	p	n	s	m
p	x	y	w	t	p	f	c	n	p	e	e	s	s	w	w	p	w	o	p	k	v	g
e	b	s	y	t	a	f	c	b	g	e	c	s	s	w	w	p	w	o	p	k	s	m

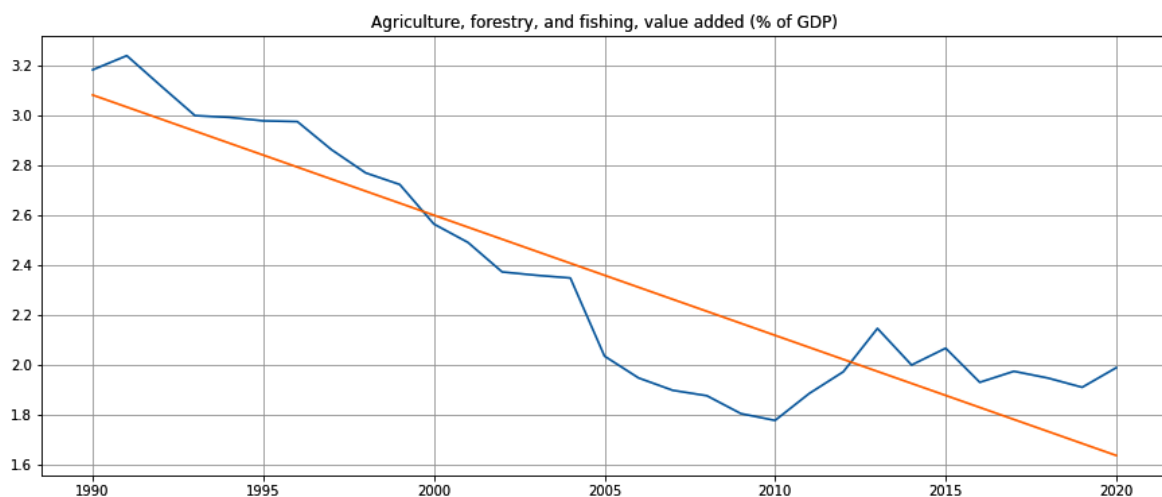


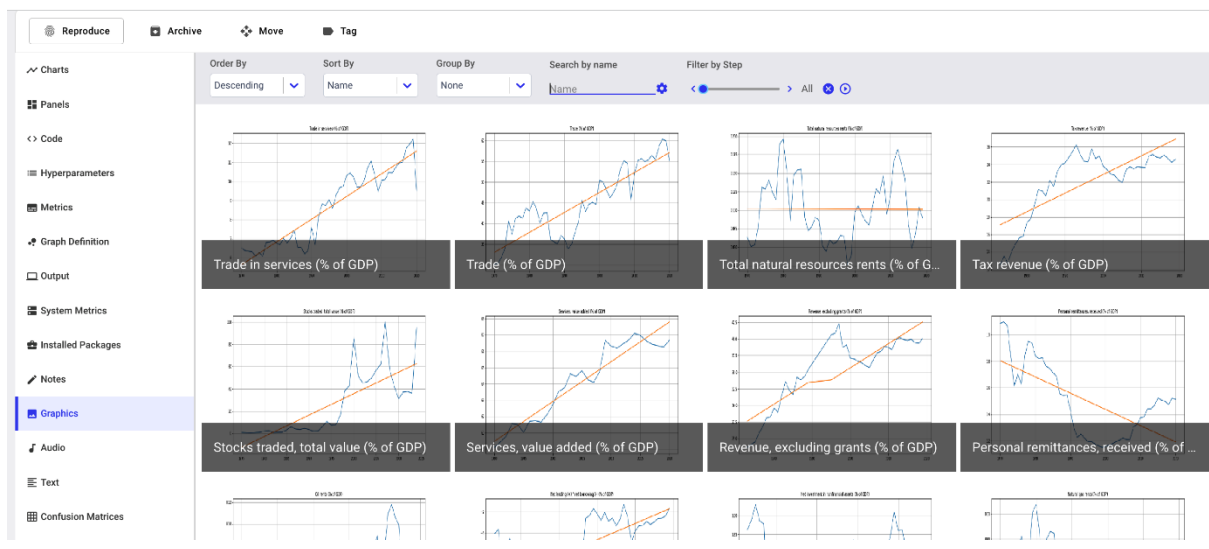
packt / java-experiment



output

8ca1fb22693d433b82ee1313ee3d1fe9-arywEF.zip





Panels

Experiments

Notes

Archive

Manag

Experiments

Filters

Sort (1)

Columns (2)

Group by

All

Selected

Hidden

<input type="checkbox"/>	NAME	MSE ↑
<input type="checkbox"/>	● mushy_amberjack_2424	2968.056
<input checked="" type="checkbox"/>	● superior_opossum_9197	3056.074
<input type="checkbox"/>	● constant_oil_6038	3061.959
<input type="checkbox"/>	● structural_caulk_9052	3063.508
<input type="checkbox"/>	● sole_brightness_3256	3065.335

Reproduce

Stop

Archive

Move

Tag

Charts

Panels

Code

Hyperparameters

Metrics

Graph Definition

Output

System Metrics

Installed Packages

Notes

Graphics

Audio

Text

Confusion Matrices

Hyperparameters

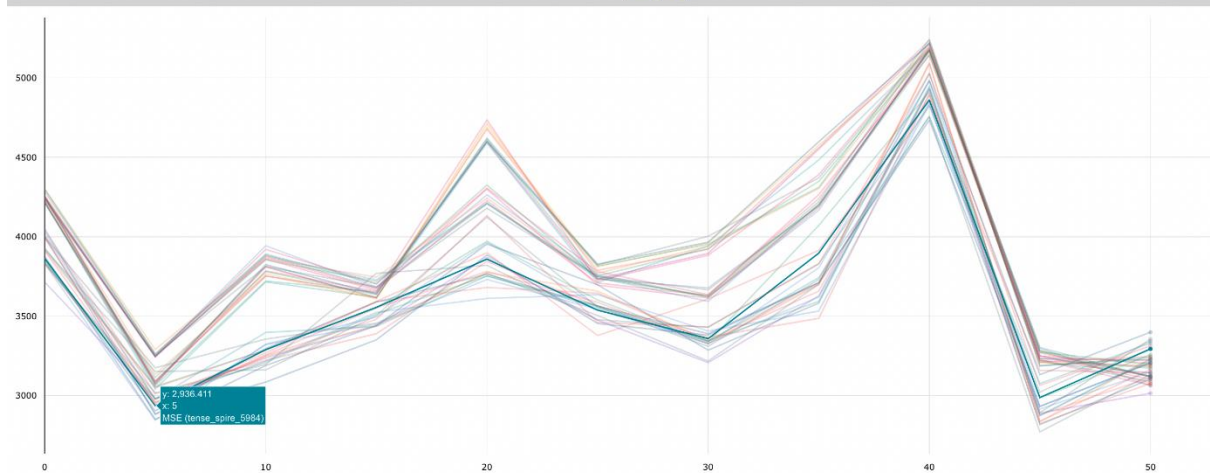
Search parameter name

Key	Value
alpha	0.9
ccp_alpha	0.0
constant	null
criterion	friedman_mse
curr_step	50
init	null
learning_rate	0.1
loss	absolute_error
max_depth	4
max_features	null

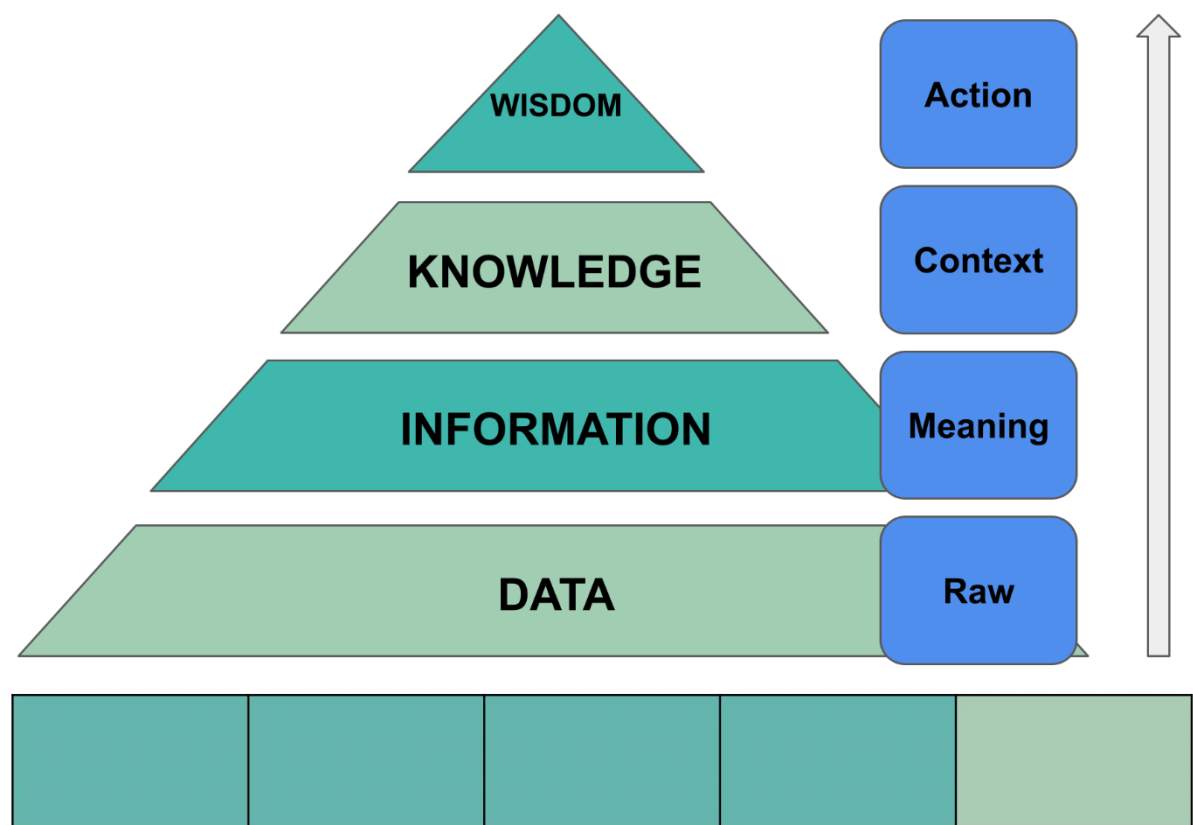
MSE VS step

xstep

ymse



Chapter 5: Building a Narrative in Comet



Men

Women

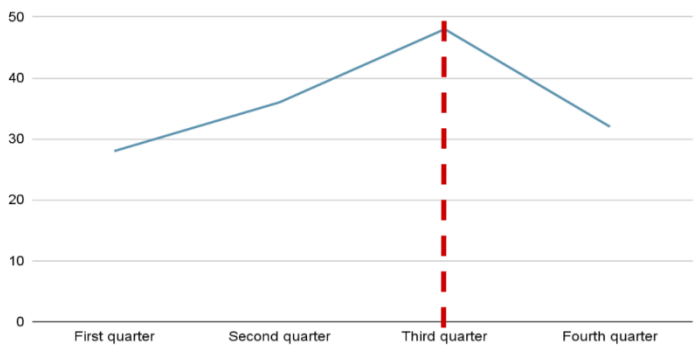
Results of the survey in the third quarter of 2021



Men

Women

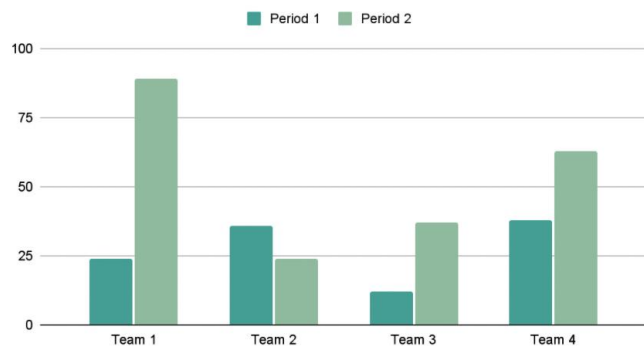
Percentage of Employees on Maternity Leave in 2021



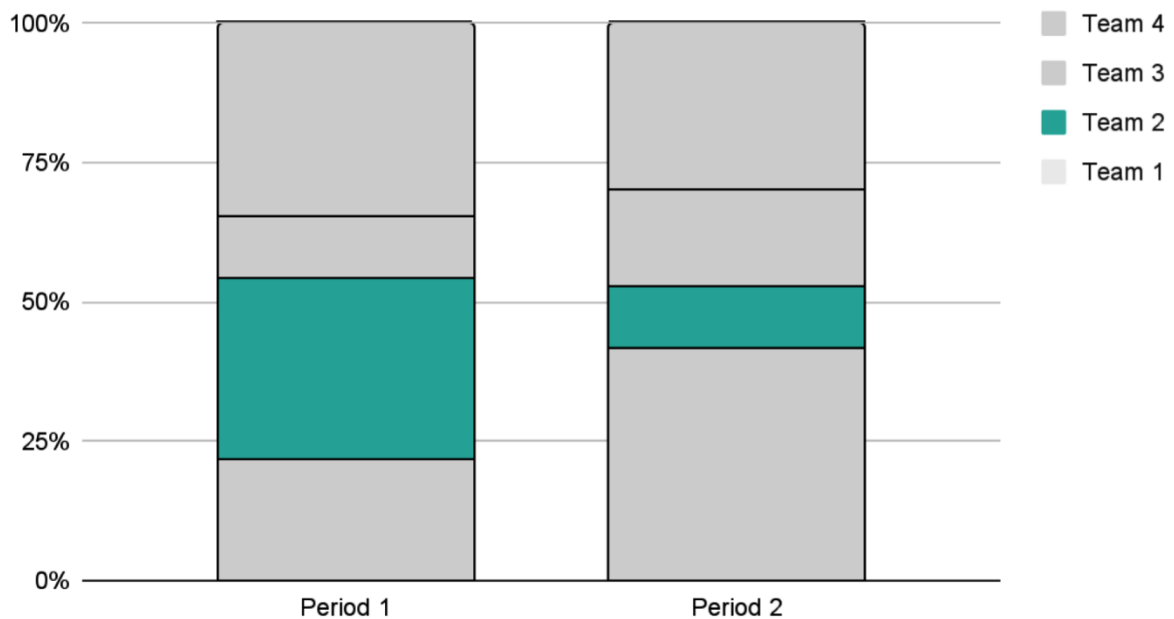
According to our survey, four out of five employees are men, and only one out of five are women. However, at the time of the survey during the third quarter of 2021, **almost 50% of female employees were on maternity leave**. This explains the low participation of women in the survey.

	Period 1	Period 2
Team 1	24	89
Team 2	36	24
Team 3	12	37
Team 4	38	63

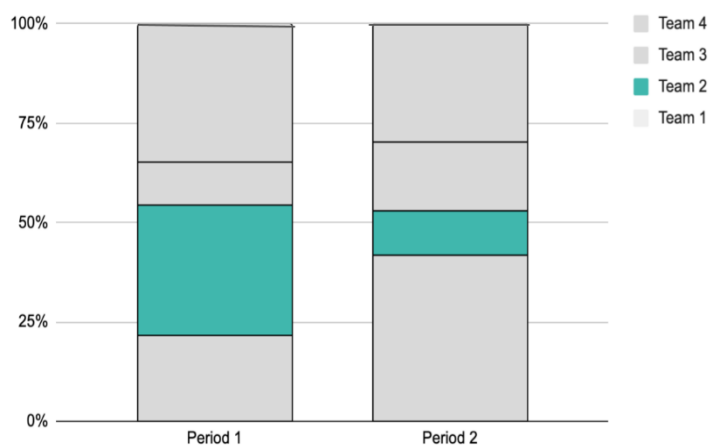
Points scored



Points scored

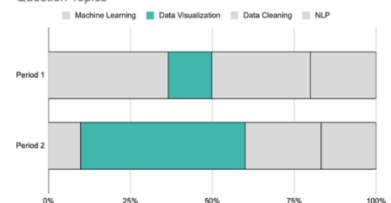


Points Scored

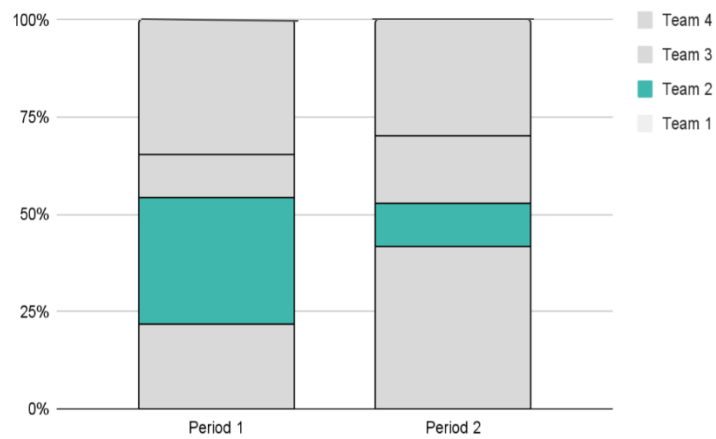


Team 2 is composed mainly of **machine learning engineers**. During Period 2, most of the questions were about **data visualization**. Thus, Team 2 marked a low score during Period 2.

Question Topics

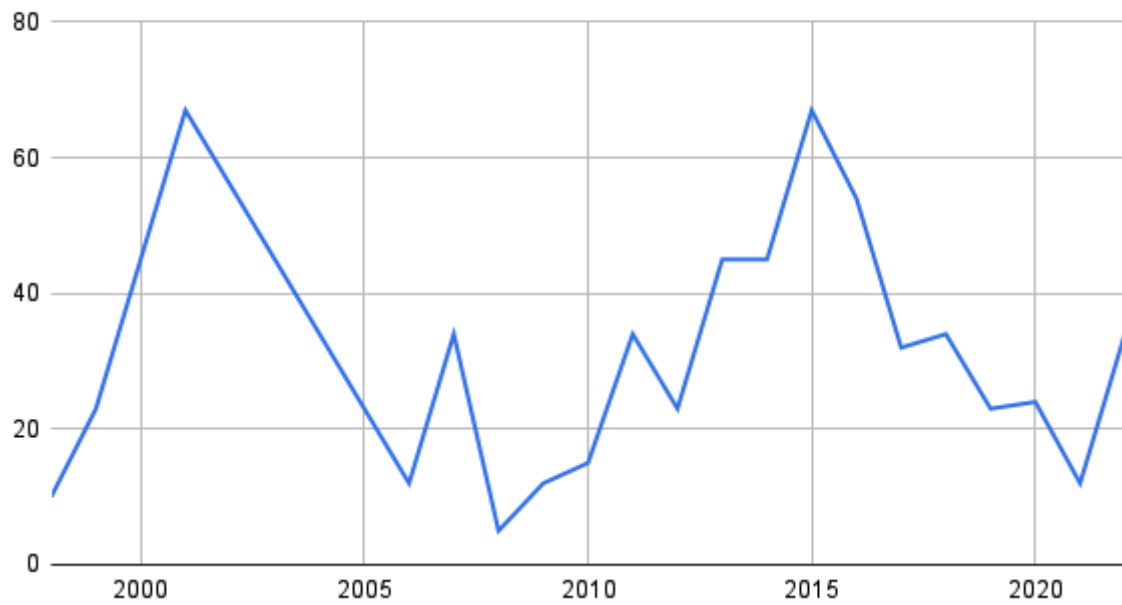


Points scored

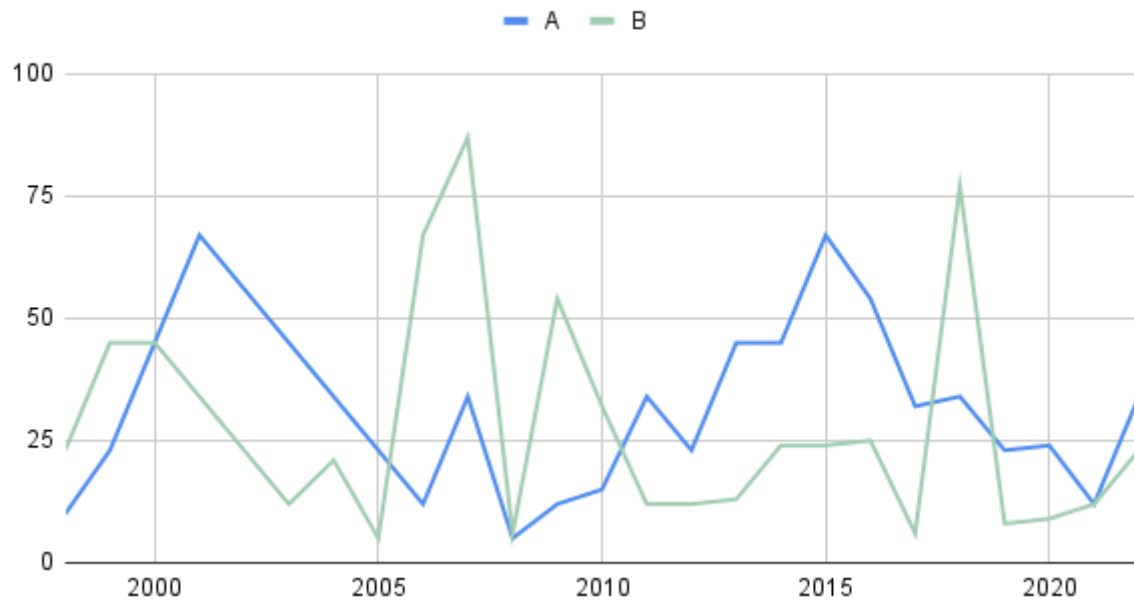


During the second period, Team 2 did **not study sufficiently**, so they achieved a low score in the practice test.

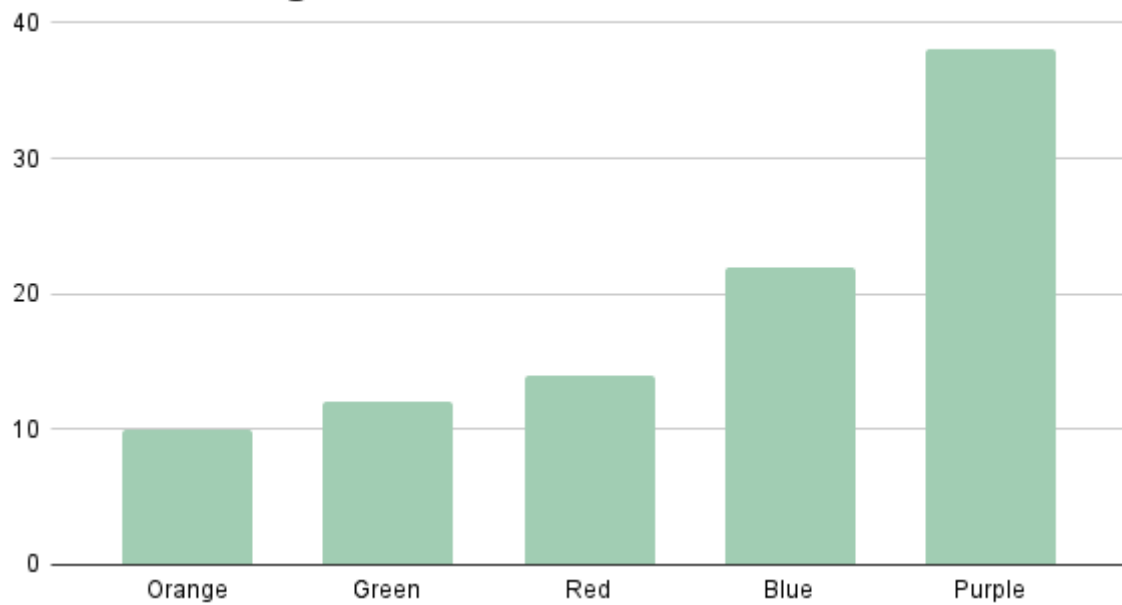
A line chart



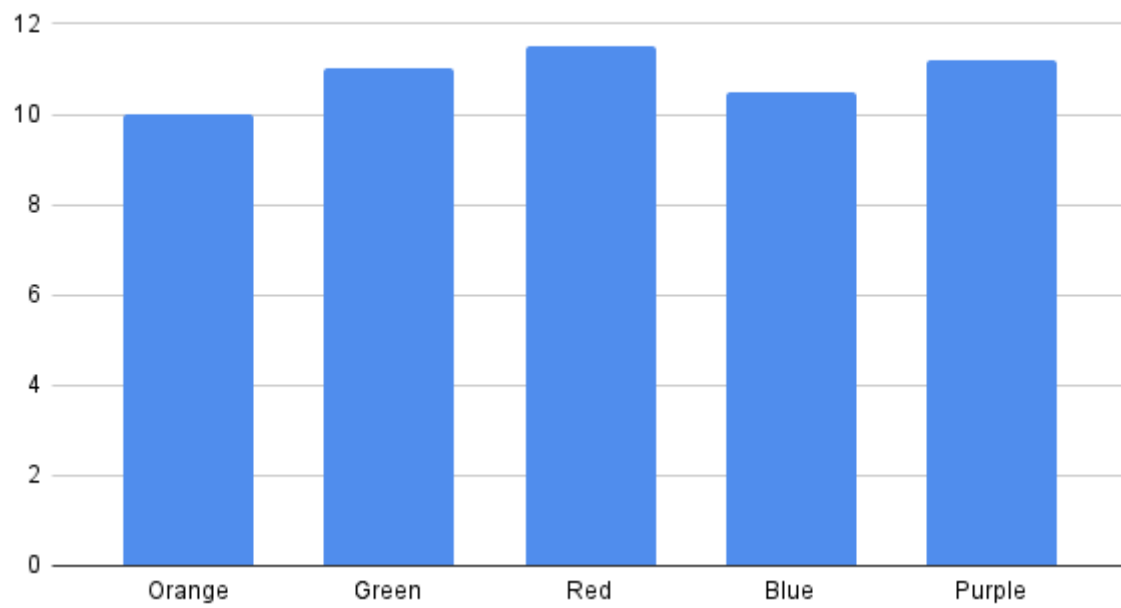
A line chart for multiple series



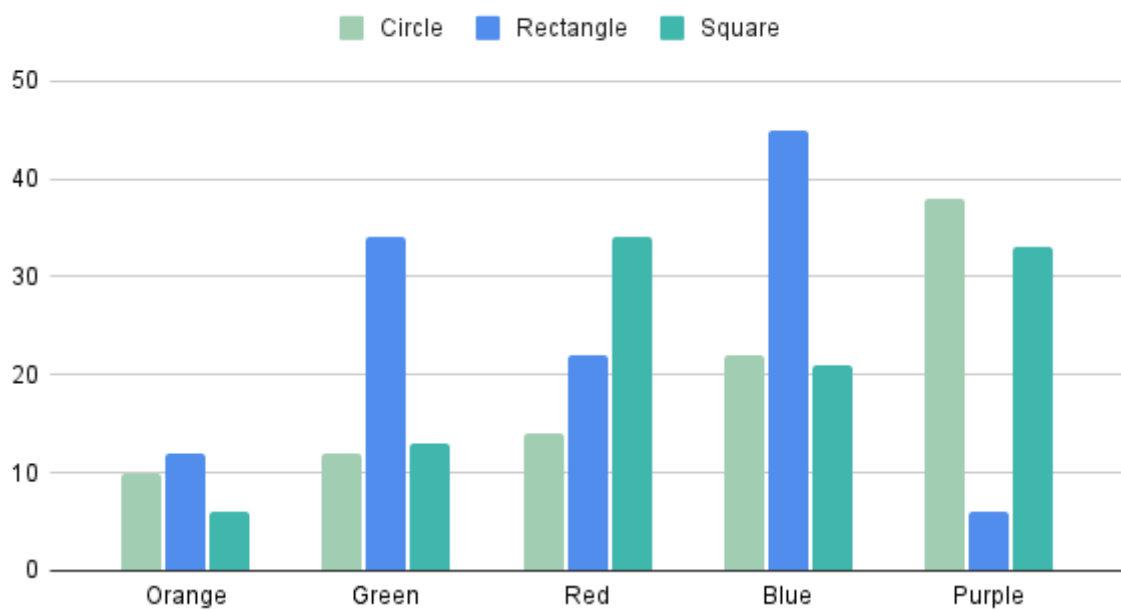
A good use of a vertical bar chart



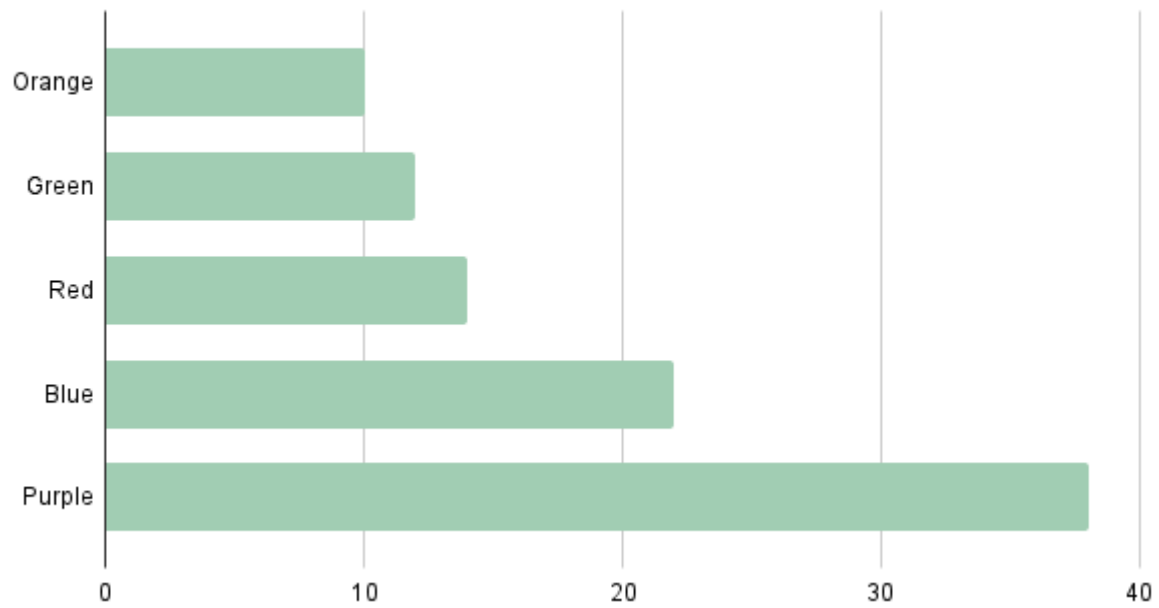
A bad use of a vertical bar chart



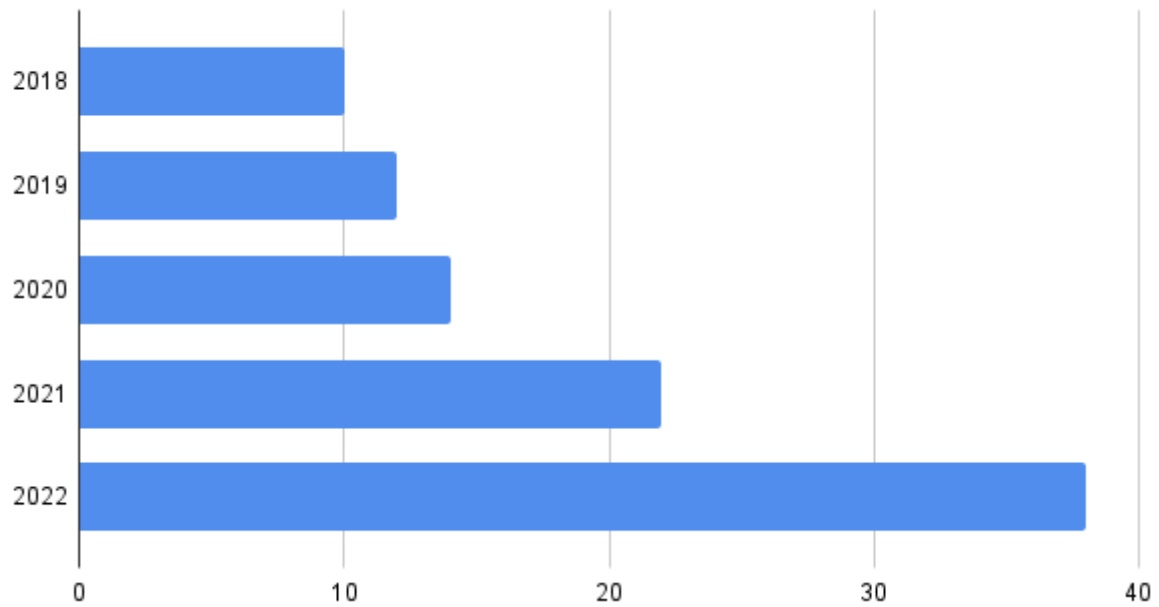
A vertical bar chart for multiple series



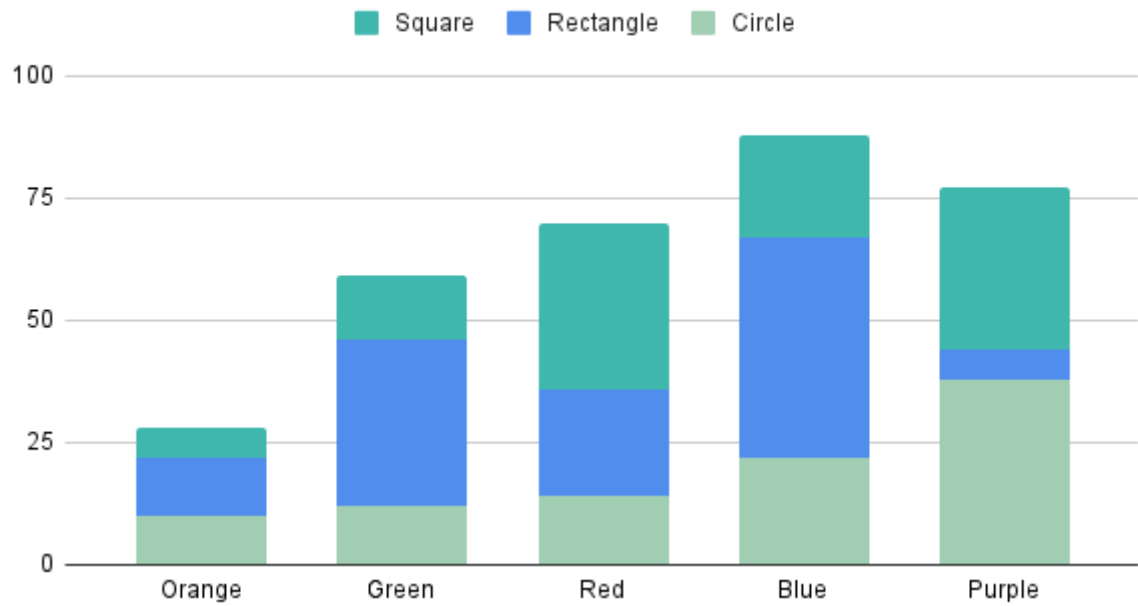
A good use of a horizontal bar chart



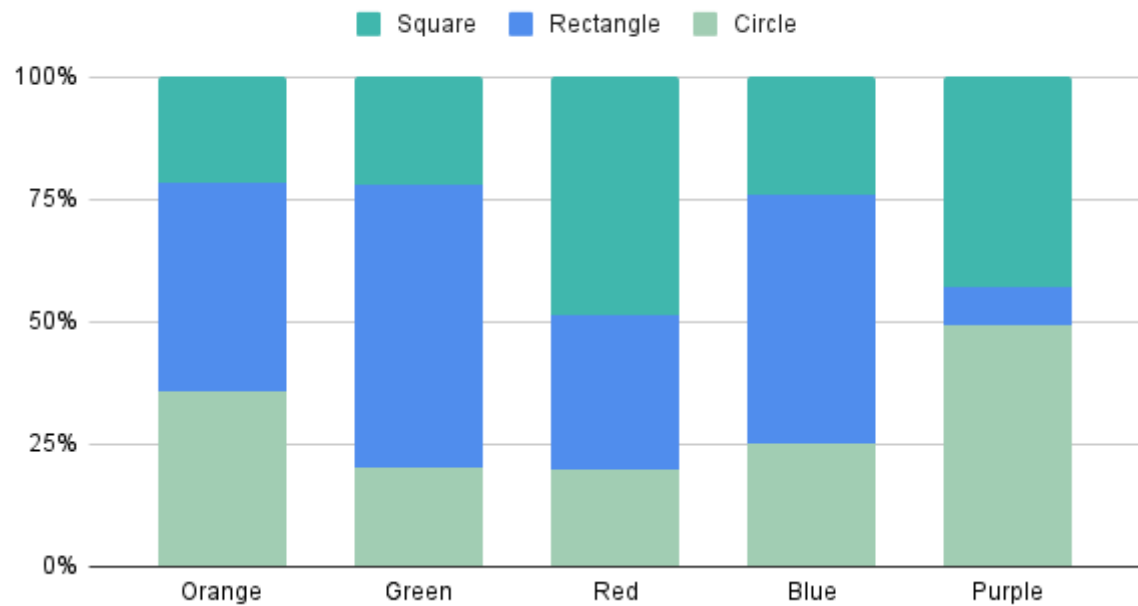
A bad use of a horizontal bar chart



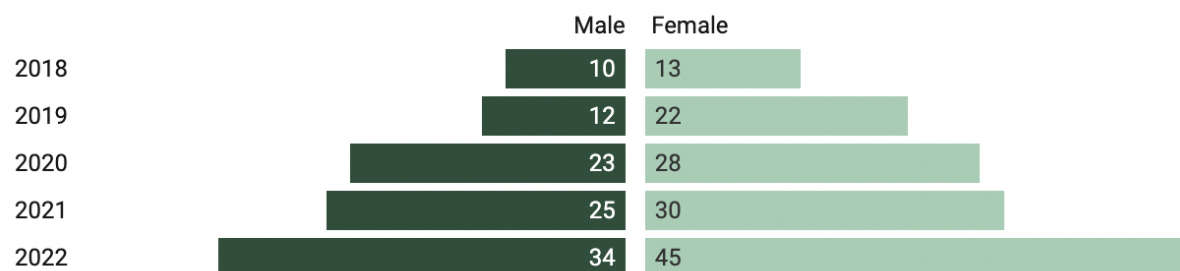
A stacked bar chart



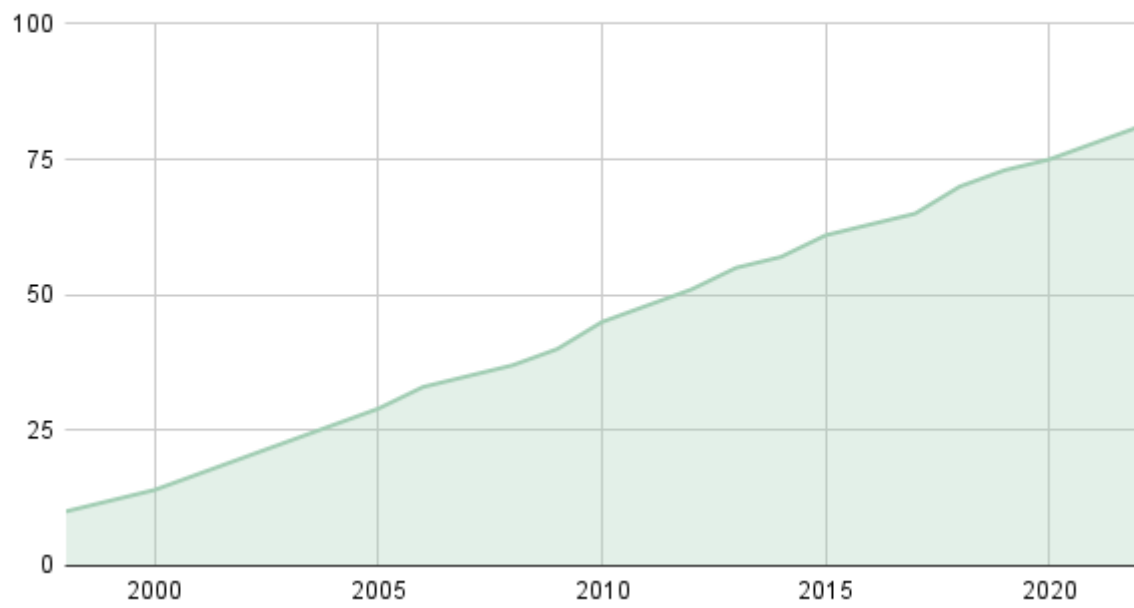
A 100% stacked bar chart



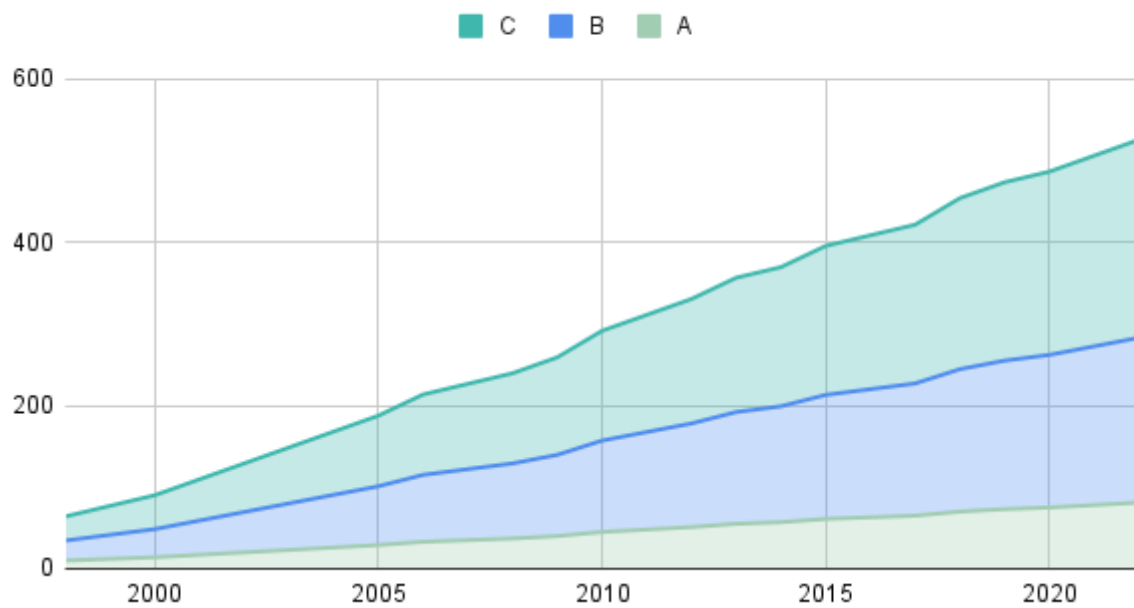
A diverging bar chart



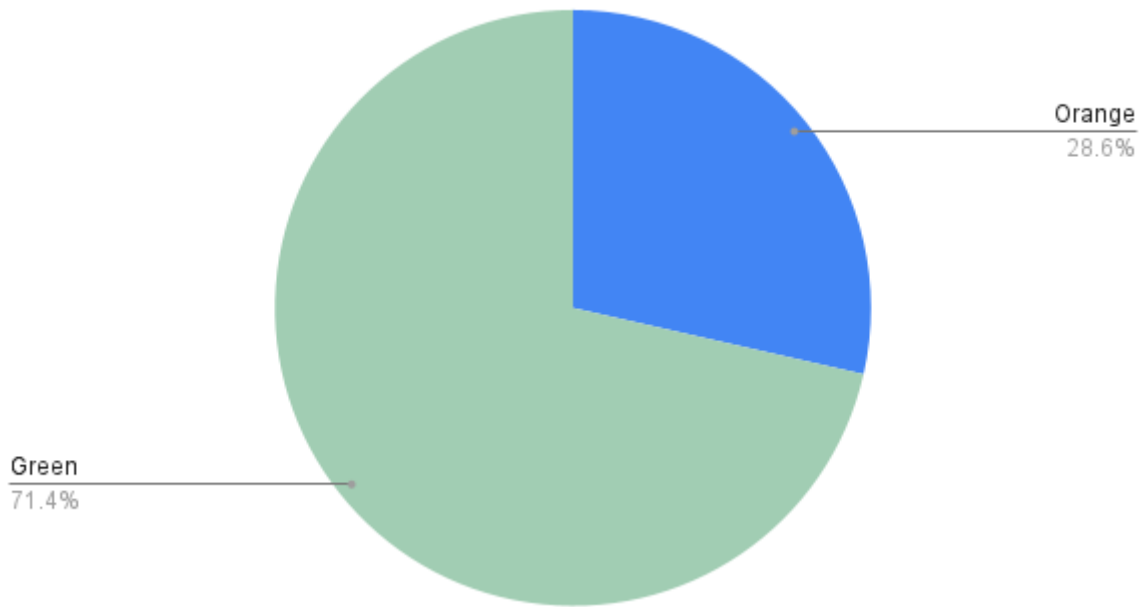
An area chart



A bad use of an area chart



A pie chart



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INDIVIDUAL [Upgrade to Add Collaborators](#)

alod83

How long is the hospital stay after surgery?

The following study shows the average length of stay in hospital after surgery, in the 4 quarters of 2021. It ranges from fewer than 24 hours to more than 60 hours.

The study involved more than 10,000 patients located in three different hospitals.

packt / data-narrative-1 / reports / how long is the hospital stay after surgery



How long is the hospital stay after surgery?

The following study shows the average length of stay in hospital after surgery, in the 4 quarters of 2021. It ranges from fewer than 24 hours to more than 60 hours.

The study involved more than 10,000 patients located in three different hospitals.

By alod83



Assets Artifacts

Search file or directory



File Name ↓

Location

Size

Last Modified

Step

Context

dataframes

data.csv

Local

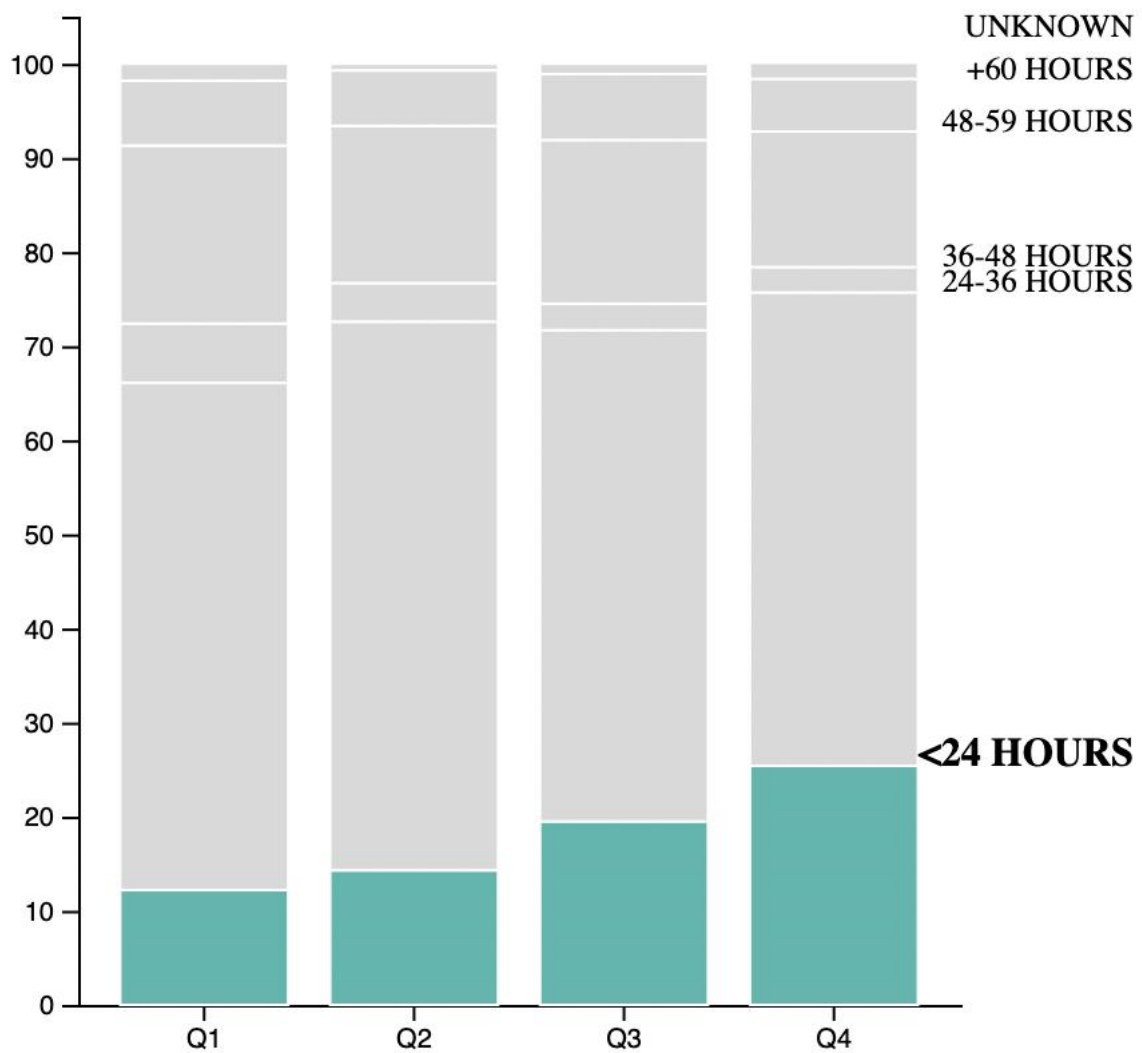
184 B

4 hours ago



notebooks

source-code



How long is the hospital stay after surgery?



Hospital patient vector created by pch.vector - www.freepik.com

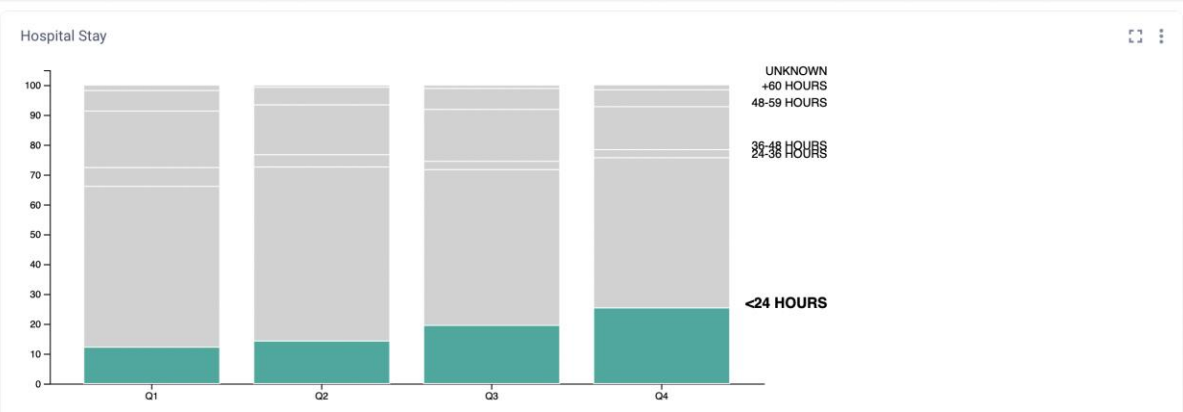
The following study shows the average length of stay in hospital after surgery, in the 4 quarters of 2021. It ranges from fewer than 24 hours to more than 60 hours. The study involved more than 10,000 patients located in three different hospitals.

A progressive increase in the short stay...

Thanks to the new hires in the day hospital wards in the previous period, there is a progressive reduction in hospitalization times after surgery.

Since Q1, there is a progressive increase in the short stay (less than 24 hours) after surgery.

Auto Refresh Refresh Edit Layout Add Panel

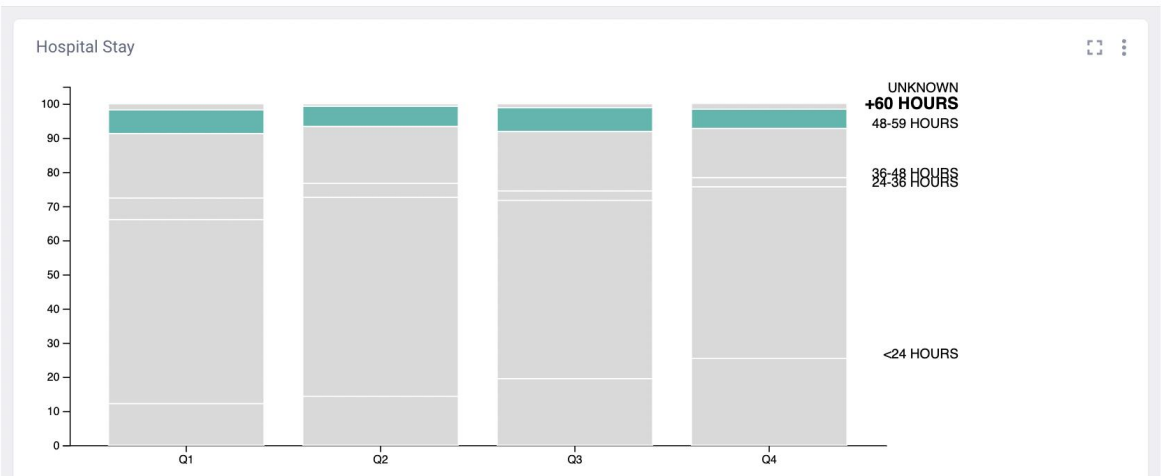


... but long stays still remain constant

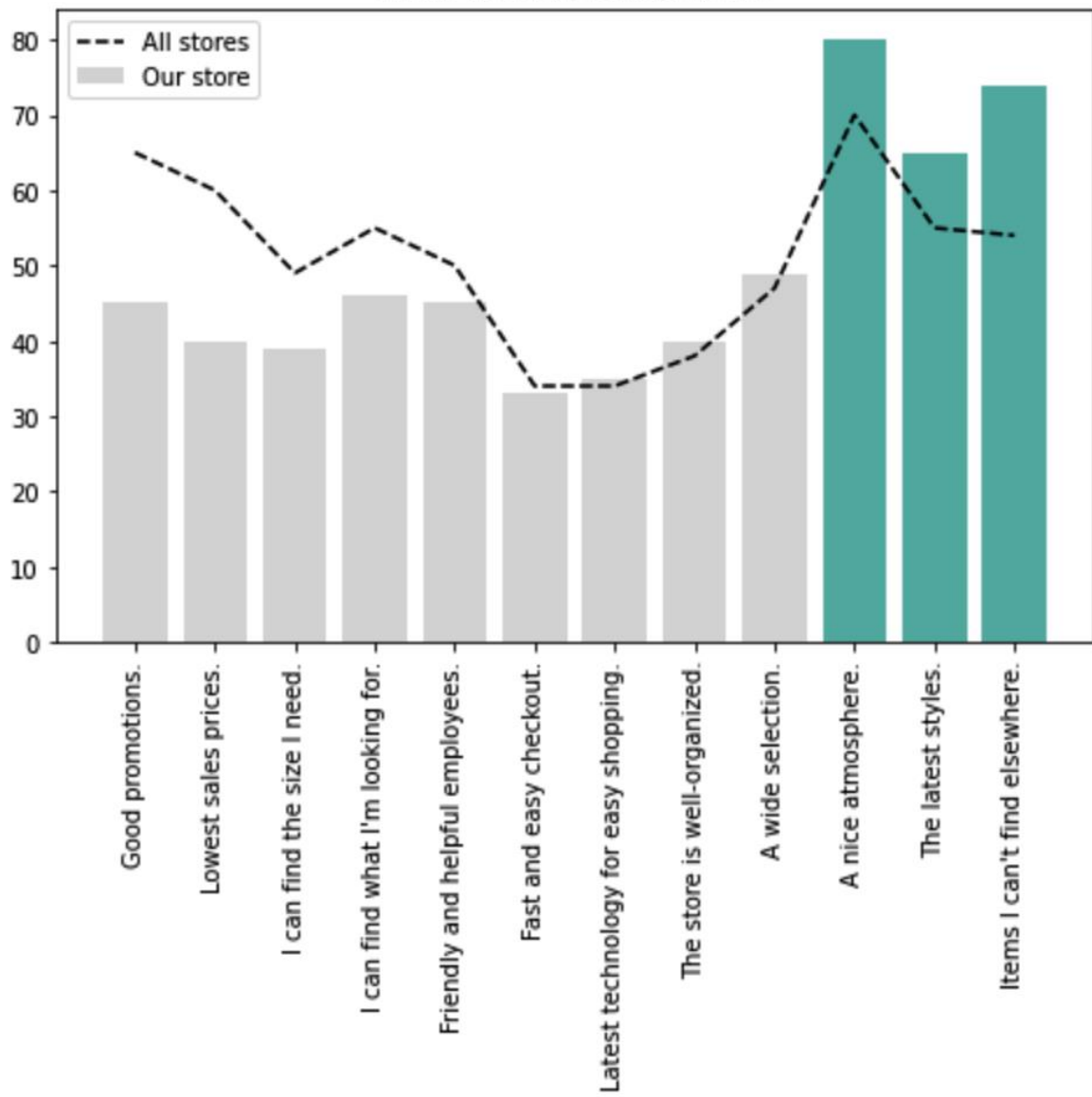
Since Q1, there is not any improvement for long stays, because no investment was done during this period for long stays.

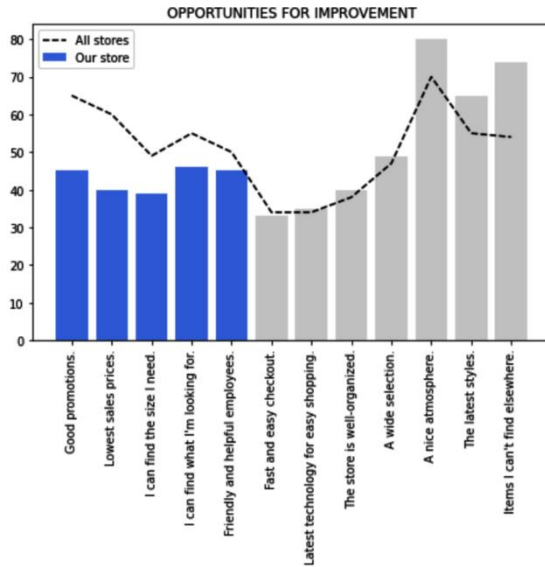
▼ Panels

Auto Refresh Refresh Edit Layout Add Panel

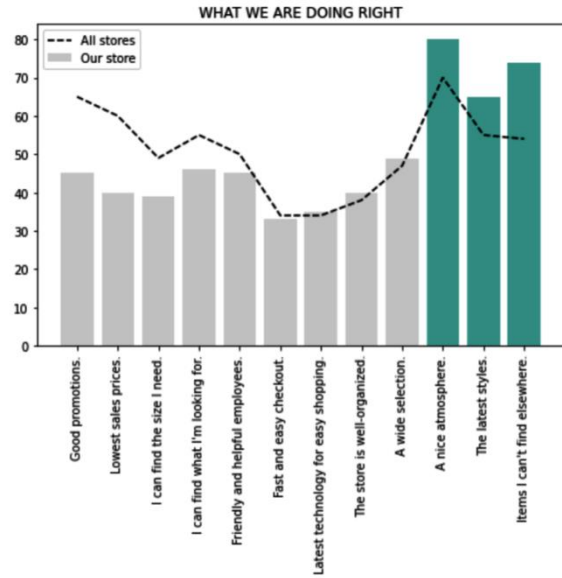


WHAT WE ARE DOING RIGHT





filter = less



filter = greater

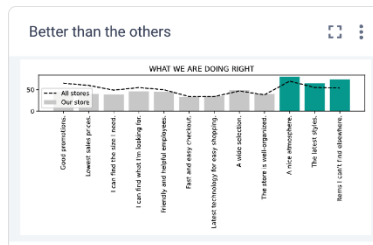
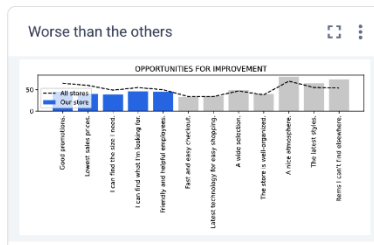
Our Customer Experience

In the previous period we did a questionnaire among our customers and we asked them what the important things are for them in choosing a store for back-to-school shopping. We then compared our results with those of the other stores.

Discussion

- Which opportunities do we have?
- How can we maintain what we are doing right?

Auto Refresh Refresh Edit Layout Add Panel

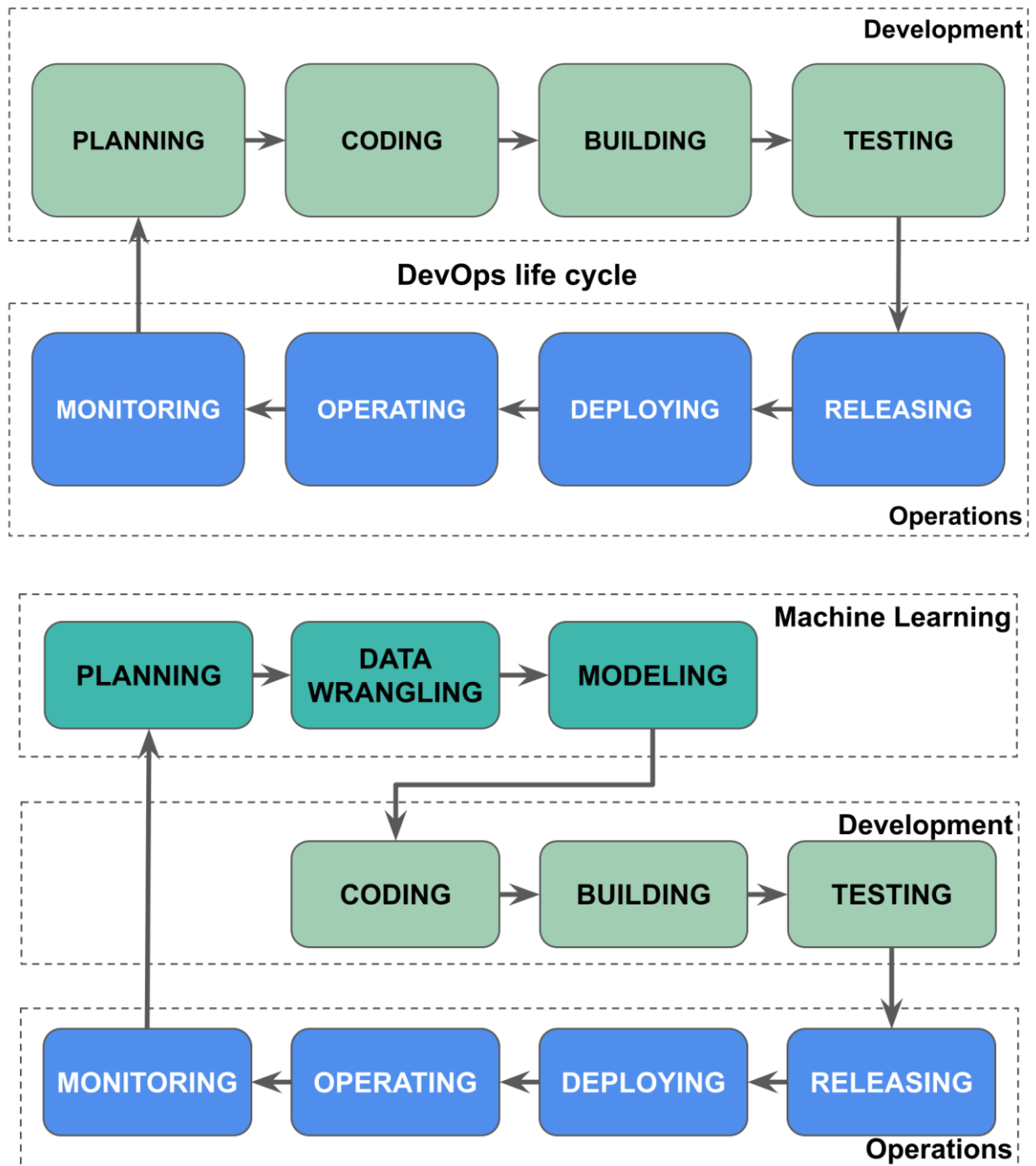


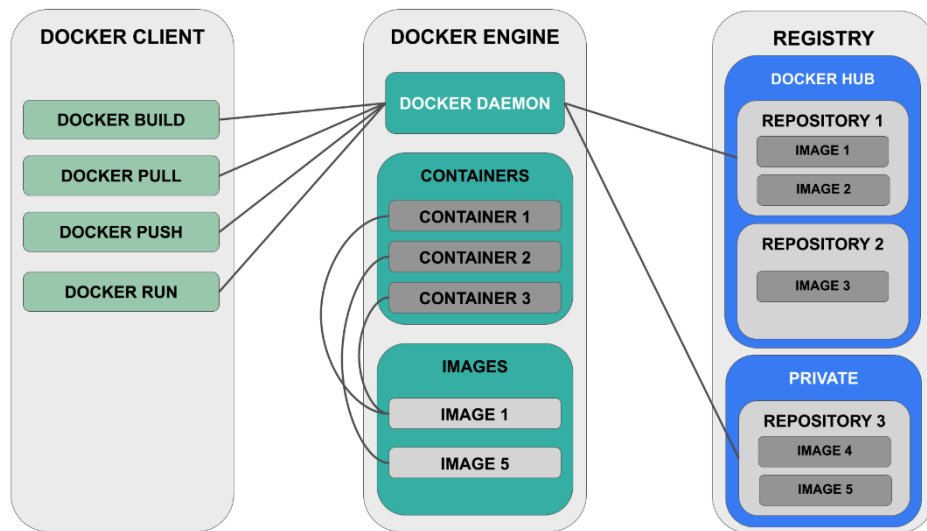
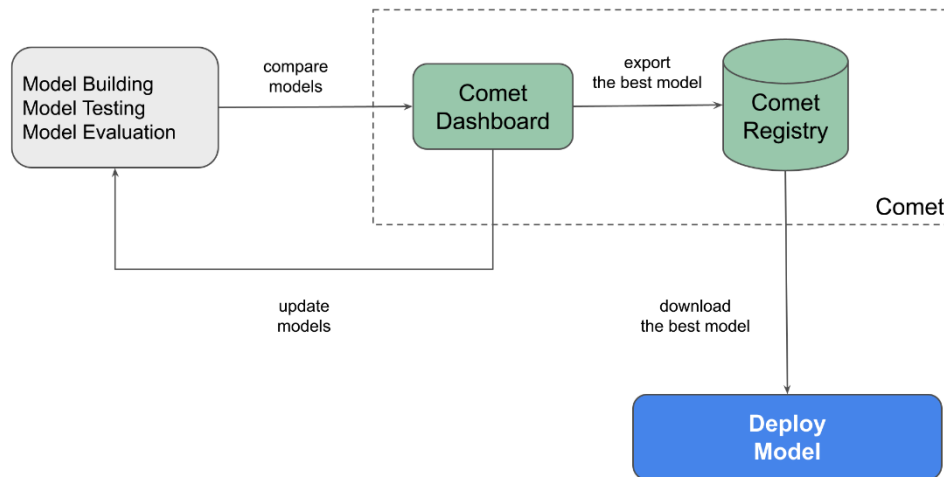
Gender	Percentage
Male	78%
Female	21%
Prefer to not say	1%

	<=24	24 and 36	36 and 48	48 and 59	>=60	Unknown
2019/Q1	12.2%	53.9%	6.3%	18.9%	6.9%	1.8%
2019/Q2	14.3%	58.3%	4.1%	16.7%	5.9%	0.7%
2019/Q3	19.5%	52.2%	2.8%	17.4%	7.0%	1.1%
2019/Q4	25.4%	50.3%	2.7%	14.4%	5.6%	1.7%

Questions	Our store	All stores
The store is well-organized.	40%	38%
Fast and easy checkout.	33%	34%
Friendly and helpful employees.	45%	50%
Good promotions.	45%	65%
I can find what I'm looking for.	46%	55%
I can find the size I need.	39%	49%
A nice atmosphere.	80%	70%
Latest technology for easy shopping.	35%	34%
Lowest sales prices.	40%	60%
A wide selection.	49%	47%
Items I can't find elsewhere.	74%	54%
The latest styles.	65%	55%

Chapter 6: Integrating Comet into DevOps





1

WRITING THE APPLICATION

`compare-models.py`

2

BUILDING THE DOCKER IMAGE

- Configuring:
 - Requirements.txt
 - Dockerfile
- Running:
 - `docker build -t compare-models .`

3

RUNNING THE DOCKER IMAGE WITHIN A DOCKER CONTAINER

```
docker run -it --rm
--env-file ../env.list
--name
running-compare-models
compare-models
```

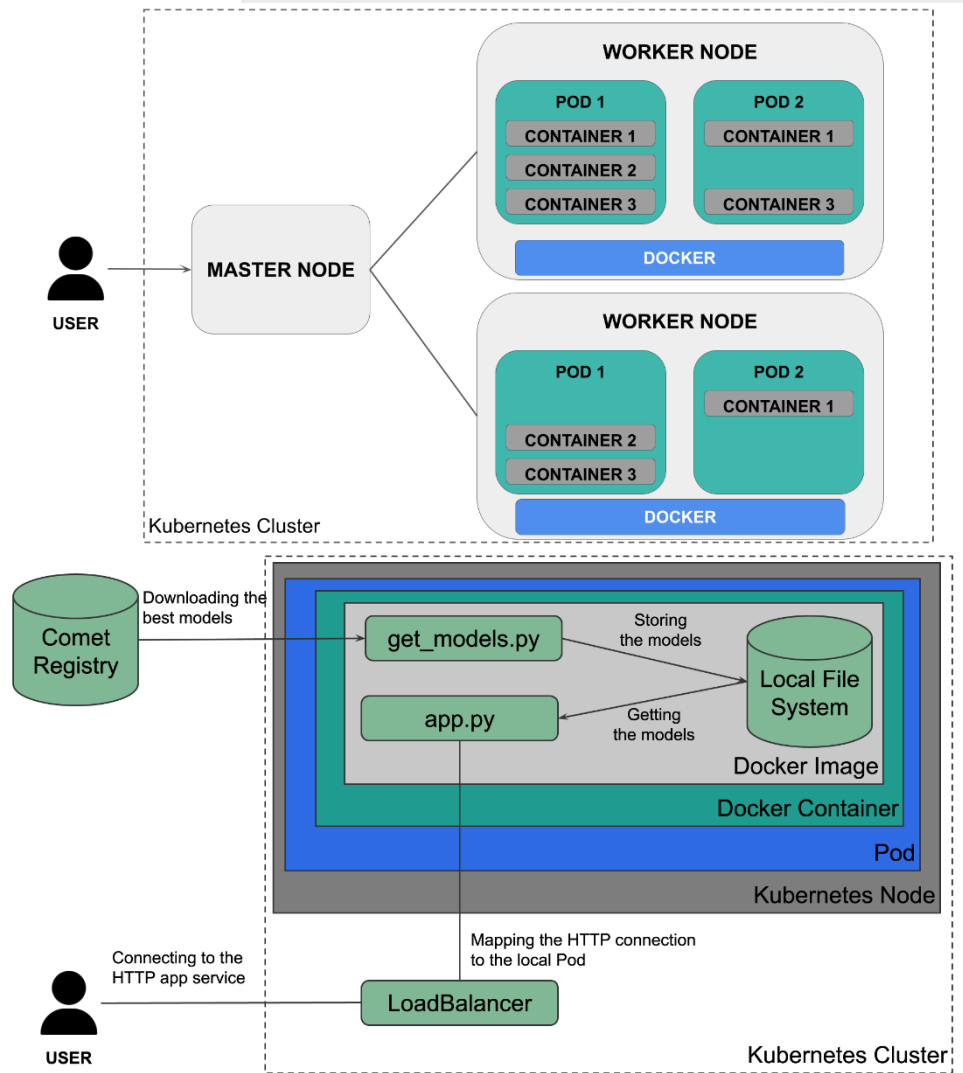
4

SHOWING THE RESULTS OF THE COMPARISON IN COMET

5

SAVING THE DOCKER IMAGE IN DOCKER HUB

- Creating a free account in the Docker Hub
- Creating the repository `comet-examples`
- Logging in to Docker Hub:
 - `docker login`
- Publishing the image to the Docker Hub:
 - `docker push comet-examples/compare-models:latest`



Diamond Classification

Carat*

Color*

Clarity*

Depth*

Table*

Price*

X*

Y*














Z*

CLASSIFY

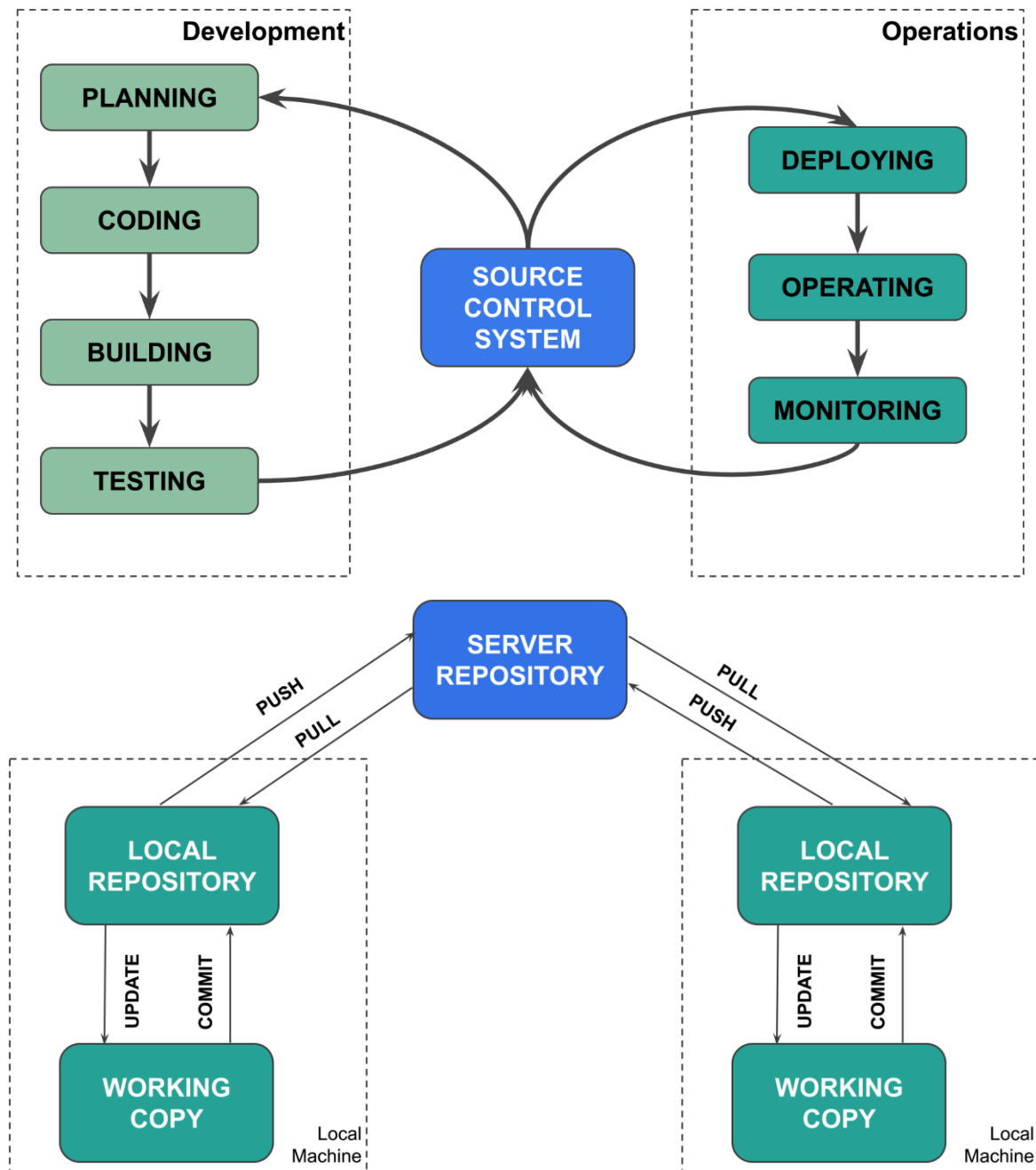
< > classification-module

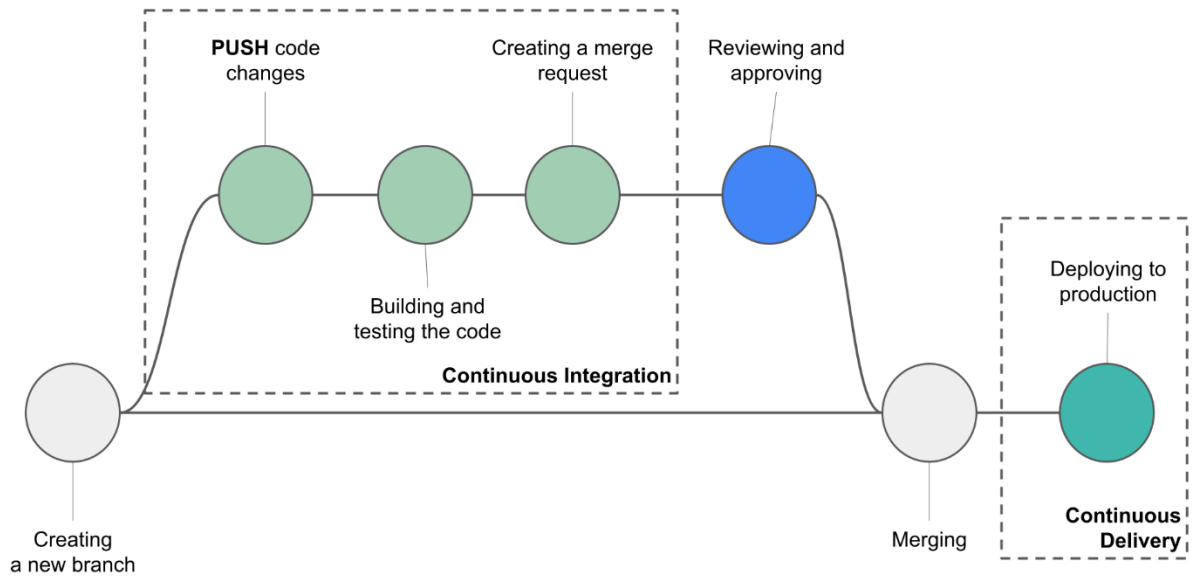
classification-module

Nome

- >  __pycache__
-  app.py
-  Dockerfile
-  get_models.py
- ▼  models
-  requirements.txt
-  run.sh
- ▼  static
- ▼  styles
-  style.css
- ▼  templates
-  index.html
-  predict.html

Chapter 7: Extending the GitLab DevOps Platform with Comet





Find file Web IDE **Clone**

Clone with SSH

`git@gitlab.com:alod83_data_scie`

Clone with HTTPS

`https://gitlab.com/alod83_data_`

Open in your IDE

- Visual Studio Code (SSH)
- Visual Studio Code (HTTPS)
- IntelliJ IDEA (SSH)
- IntelliJ IDEA (HTTPS)

✔ You pushed to **new_branch** just now

Create merge request

main



test_models / **helloWorld.py**

Switch branch/tag



Search branches and tags



Branches

new_branch

✔ main

Project information

Learn GitLab22%

Repository

Issues0

Merge requests1

CI/CD

Security & Compliance

Deployments

Packages & Registries

Infrastructure

Monitor

Analytics

Wiki

Snippets

Settings

modified greeting string

Overview0Commits1Changes1



Request to merge new_branch into main

The source branch is 1 commit behind the target branch



Looks like there's no pipeline here.

GitLab CI/CD can automatically build, test, and deploy your application. It only takes a few minutes to get started, and we can help you create a pipeline configuration file.

Try out GitLab Pipelines



Approve

Approval is optional ?



Merge



Delete source branch



Squash commits ?

Runners

Collapse

Runners are processes that pick up and execute CI/CD jobs for GitLab. [How do I configure runners?](#)

Register as many runners as you want. You can register runners as separate users, on separate servers, and on your local machine. Runners are either:

- active - Available to run jobs.
- paused - Not available to run jobs.

Specific runners

These runners are specific to this project.

Set up a specific runner for a project

- Install GitLab Runner and ensure it's running.
- Register the runner with this URL:
<https://gitlab.com/>

And this registration token:

Reset registration token

Show runner installation instructions

Shared runners

These runners are shared across this GitLab instance.


[Shared Runners on GitLab.com](#) run in [autoscale mode](#) and are powered by Google Cloud Platform. Autoscaling means reduced wait times to spin up builds, and isolated VMs for each project, thus maximizing security.

They're free to use for public open source projects and limited to 400 CI minutes per month per group for private projects. Read about all [GitLab.com plans](#).

Enable shared runners for this project



Available shared runners: 42

 Your changes have been successfully committed.



 main 

 Pipeline #534582697 passed for 1679aab1: [Update .gitlab-ci.yml file](#)





[View pipeline](#)


✓ This GitLab CI configuration is valid. [Learn more](#)

 Project information

 Repository

 Issues 0

 Merge requests 1

 CI/CD


Pipelines


Editor


Jobs


Schedules

 Security & Compliance

 Deployments

 Packages & Registries


 Infrastructure

 Monitor


 Analytics

 Wiki



 passed


Pipeline #534582697 triggered 5 minutes ago by  Angelica Lo Duca

Update .gitlab-ci.yml file

 1 job for [main](#) in 1 minute and 22 seconds (queued for 1 second)

 latest

 1679aab1 

 No related merge requests found.

Pipeline Needs Jobs 1 Tests 0

Run

 run-job



```
42  activators BashActivator, CShellActivator, FishActivator, NushellActivator, PowerShellActivator, PythonAc
    tivator
43  $ source venv/bin/activate
44  $ pip install -r requirements.txt
45  Requirement already satisfied: scikit-learn in ./venv/lib/python3.8/site-packages (from -r requirement
    s.txt (line 1)) (1.0.2)
46  Requirement already satisfied: threadpoolctl>=2.0.0 in ./venv/lib/python3.8/site-packages (from scikit
    -learn->-r requirements.txt (line 1)) (3.1.0)
47  Requirement already satisfied: numpy>=1.14.6 in ./venv/lib/python3.8/site-packages (from scikit-learn-
    >-r requirements.txt (line 1)) (1.22.3)
48  Requirement already satisfied: joblib>=0.11 in ./venv/lib/python3.8/site-packages (from scikit-learn->
    -r requirements.txt (line 1)) (1.1.0)
49  Requirement already satisfied: scipy>=1.1.0 in ./venv/lib/python3.8/site-packages (from scikit-learn->
    -r requirements.txt (line 1)) (1.8.0)
50  $ python linear-regression.py
51  MSE: 2900.1732878832318
52  Saving cache for successful job
53  Creating cache default-protected...
54  .cache/pip: found 128 matching files and directories
55  venv/: found 6833 matching files and directories
56  Uploading cache.zip to https://storage.googleapis.com/gitlab-com-runners-cache/project/35917223/default
    t-protected
57  Created cache
58  Cleaning up project directory and file based variables
59  Job succeeded
```

✓ You pushed to **test** just now

Create merge request

main

test_models /

+

History

Find file

Web IDE

▼

Download

Clone

T test_models

Project information

Repository

Issues

0

Merge requests

1

CI/CD

Security & Compliance

Deployments

Packages & Registries

Infrastructure

Monitor

Analytics

Wiki

Snippets

Settings

test_models > test_models > Merge requests > !3

Open

Created 6 minutes ago by Angelica Lo Duca

Owner

modified linear regression

Overview

0

Commits

2

Pipelines

2

Changes

2



Request to merge **test** into **main**

The source branch is **9 commits behind** the target branch



Pipeline #534574404 passed for 6a98b817 on test 2 minutes ago



Approve

Approval is optional



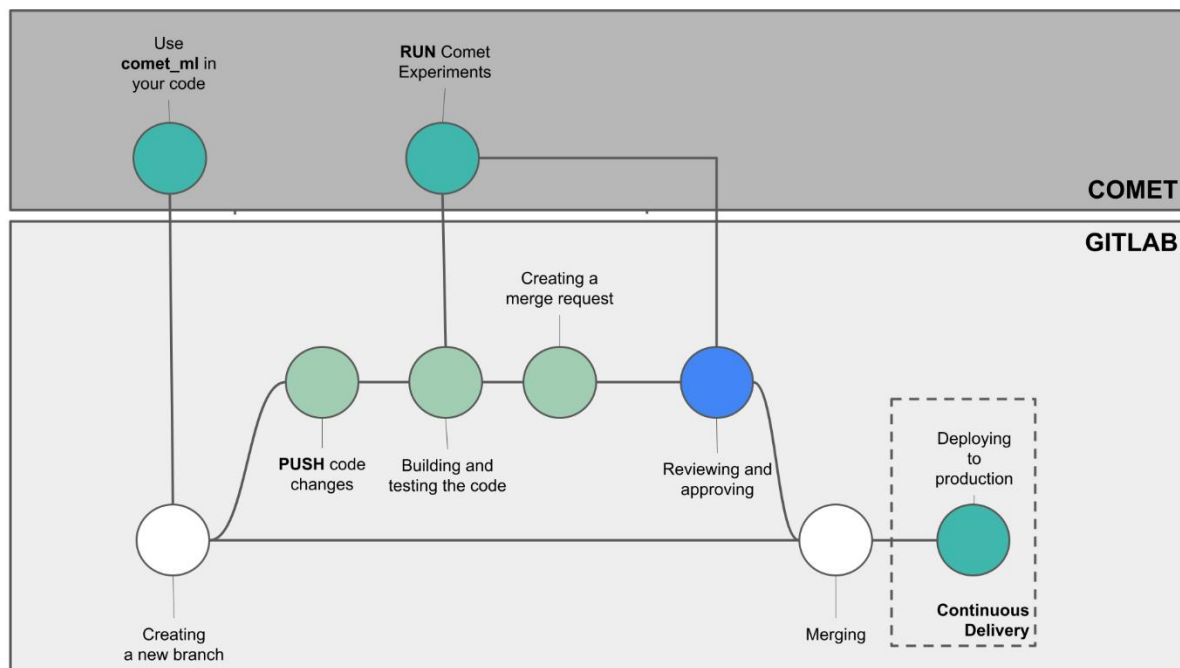
Merge



Delete source branch



Squash commits



Variables

Collapse

Variables store information, like passwords and secret keys, that you can use in job scripts. [Learn more.](#)

Variables can be:

- **Protected:** Only exposed to protected branches or protected tags.
- **Masked:** Hidden in job logs. Must match masking requirements. [Learn more.](#)

Environment variables are configured by your administrator to be **protected** by default.

Type	↑ Key	Value	Protected	Masked	Environments	
Variable	COMET_API_KEY	*****	✓	✗	All (default)	
Variable	COMET_WORKSPACE	*****	✓	✗	All (default)	

Add variable

Reveal values

By default, protected branches restrict who can modify the branch. [Learn more.](#)

Protect a branch

Branch:

test

Wildcards such as `*-stable` or `production/*` are supported.

Allowed to merge:

Maintainers

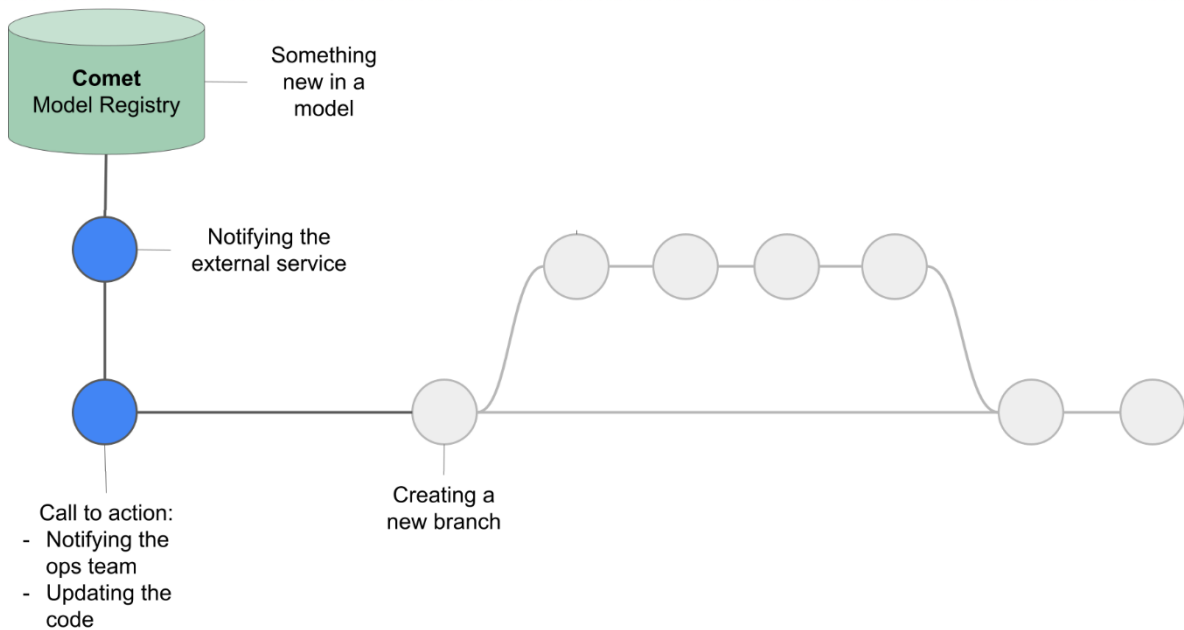
Allowed to push:

Maintainers

Allowed to force push:

☒ Allow all users with push access to [force push](#).

Protect



Container Registry

CLI Commands ▾

📦 1 Image repository ⌚ Expiration policy is disabled.

Q

Updated ▾

↓=

angelica.loduca/docker-example/ Root image 📄

🏷 1 Tag



Chapter 8: Comet for Machine Learning



Experiments

Filters

Sort (2)

Columns (4)

Group by

All

Selected

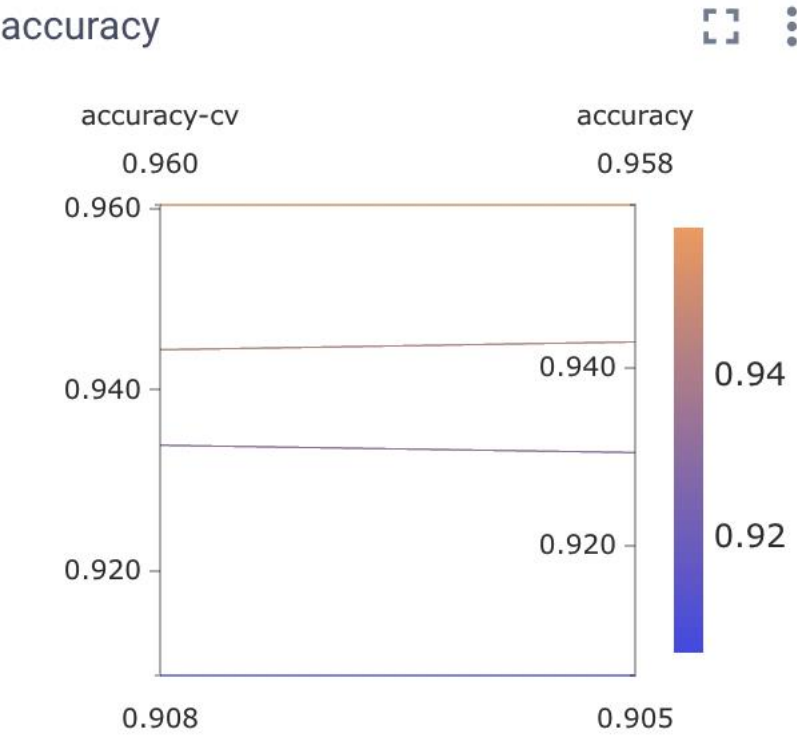
Hidden

<input type="checkbox"/> NAME	DURATION	ACCURACY-CV	ACCURACY
<input type="checkbox"/> <div>KNeighborsClassifier</div>	00:00:04	0.933	0.93
<input type="checkbox"/> <div>GaussianNB</div>	00:00:01	0.908	0.905
<input type="checkbox"/> <div>DecisionTreeClassifier</div>	00:00:06	0.944	0.942
<input type="checkbox"/> <div>RandomForest</div>	00:01:01	0.96	0.958

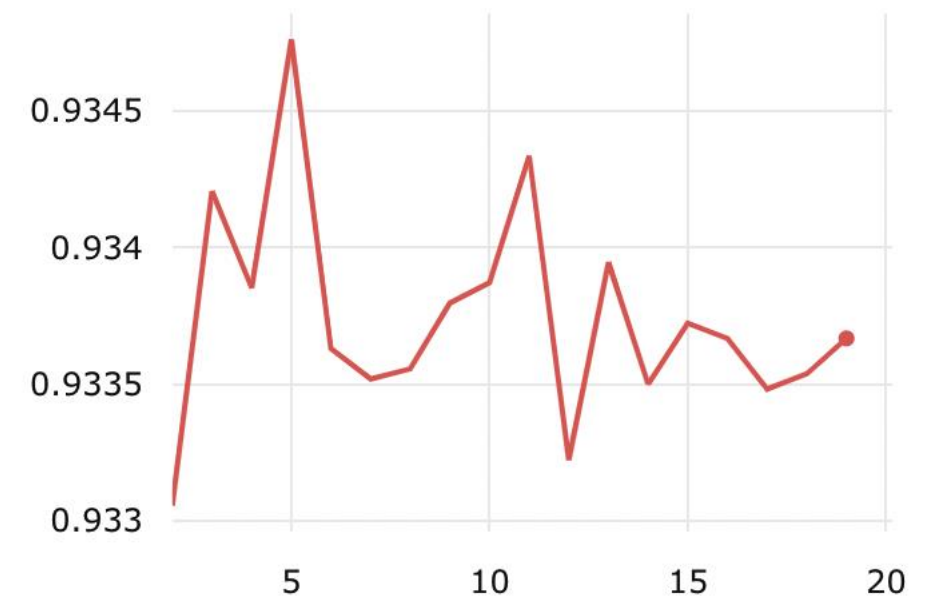
|< <

Showing 1-4 of 4

> >|



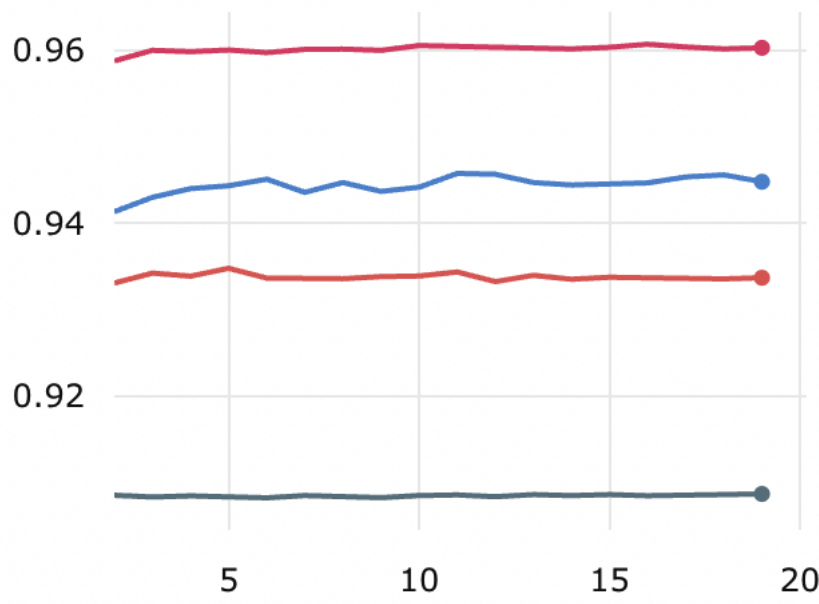
accuracy-cv



Experiments Filters (1) Sort (2) Columns (5) Group by

<div>All<div>Selected</div><div>Hidden</div></div>				
<input type="checkbox"/> NAME	DURATION	ACCURACY-CV	ACCURACY	TAGS
<input checked="" type="checkbox"/> <div>KNeighborsClassifier-kfold</div>	00:00:45	0.933		<div>KNeighborsClassifier-kfold</div> <div>kfold</div>
<input type="checkbox"/> <div>GaussianNB-kfold</div>	00:00:06	0.908		<div>GaussianNB-kfold</div> <div>kfold</div>
<input type="checkbox"/> <div>DecisionTreeClassifier-kfold</div>	00:00:51	0.944		<div>DecisionTreeClassifier-kfold</div> <div>kfold</div>
<input type="checkbox"/> <div>RandomForest-kfold</div>	00:16:18	0.96		<div>RandomForest-kfold</div> <div>kfold</div>
<div><div> <</div><div><</div><div>Showing 1-4 of 4</div><div>></div><div>> </div></div>				

accuracy-cv VS ... x:st... y:accurac...



Experiments Filters (1) Sort (1) Columns (6) Group by (1)

All Selected Hidden

<input type="checkbox"/>	NAME	DURATION	MEAN_TEST_SCORE↓	CRITERION
--------------------------	------	----------	------------------	-----------

Tags: DecisionTreeClassifier-gs

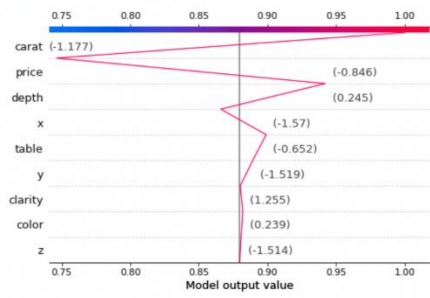
<input type="checkbox"/>	managing_university_2092	00:00:01	0.946	gini
<input type="checkbox"/>	random_carp_9145	00:00:03	0.946	gini
<input type="checkbox"/>	stale_water_2279	00:00:04	0.945	gini
<input type="checkbox"/>	sticky_gulf_2120	00:00:02	0.945	entropy
<input type="checkbox"/>	greasy_wolf_9654	00:00:02	0.944	entropy
<input checked="" type="checkbox"/>	colonial_jig_527	00:00:02	0.944	entropy

Experiments Filters (2) Sort (1) Columns (7) Group by

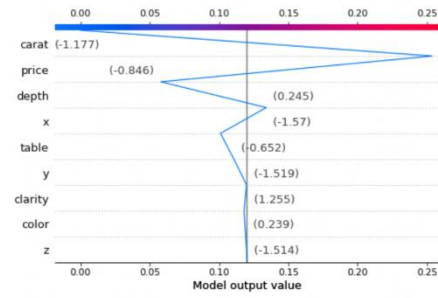
All Selected Hidden

<input type="checkbox"/>	NAME	DURATION	MEAN_TEST_SCORE↓	CRITERION	N_NEIGHBORS	MIN_SAMPLES_SPLIT	TAGS
<input type="checkbox"/>	managing_university_2092	00:00:01	0.946	gini		4	DecisionTreeClassifier-gs

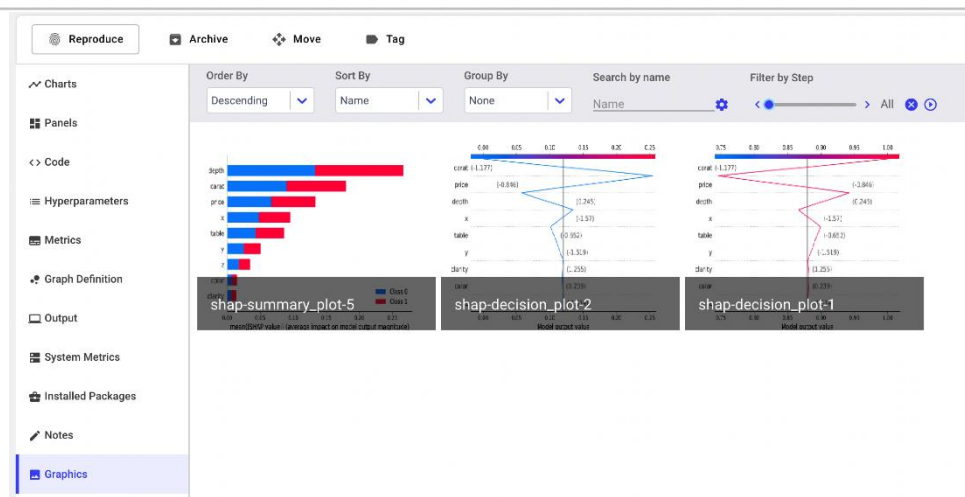
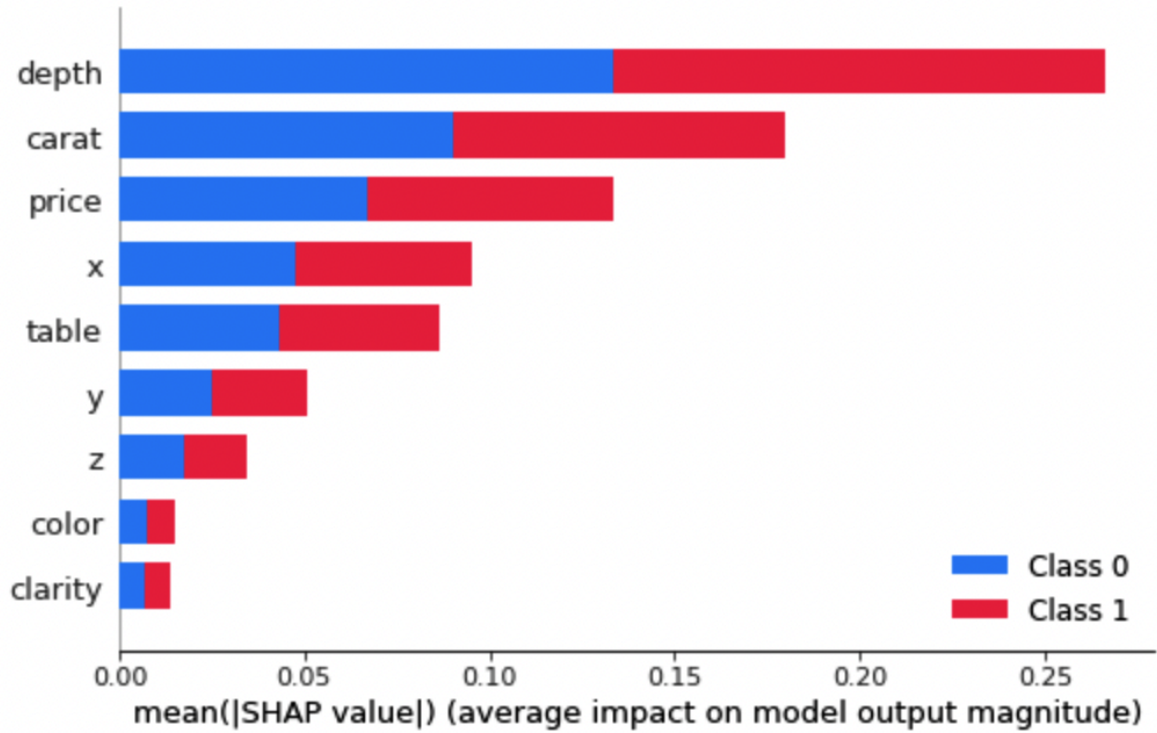
Showing 1-1 of 1



TARGET 0



TARGET 1



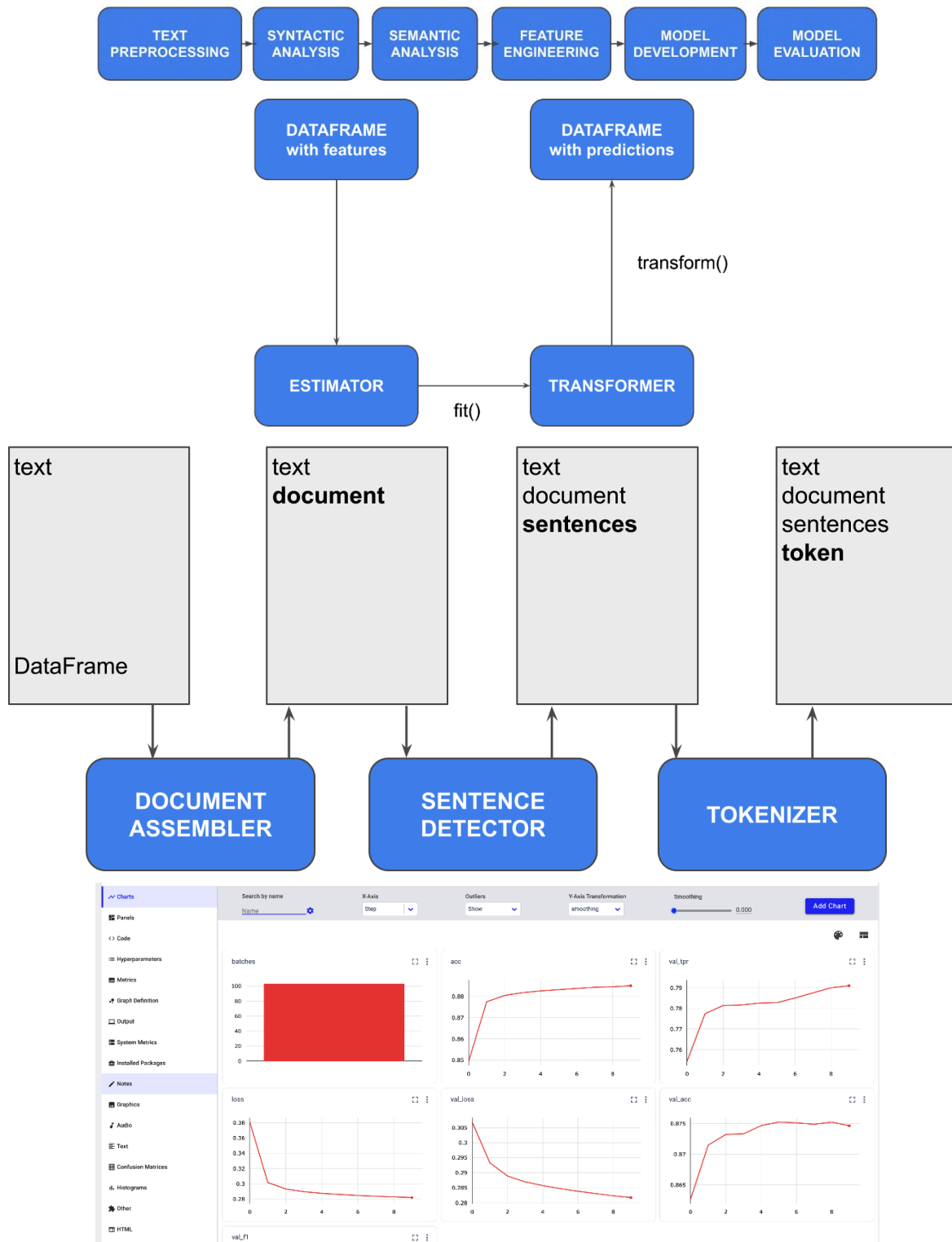
Selecting the Best model to Predict Diamond Cut

Data challenge	Description	Possible countermeasures
Insufficient quantity of data	The dataset is too small to represent the problem.	Searching for new data Enriching the dataset with synthetic samples
Poor quality of data	Presence of duplicates or outliers, missing values, and other similar issues.	Performing data cleaning
Non-representative data	The dataset does not represent the problem or partially represents the problem.	Searching for new data

Model challenge	Description	Possible countermeasures
Overfitted/underfitted model	The model depends on the training set too much and is not able to generalize the problem.	Balancing the dataset
Low performance	The model does not behave as expected.	Hyperparameter tuning Changing the model
Time-consuming/process-consuming training	Training the model requires a lot of time or computational resources.	Parallelization techniques
Concept drift	Over time, the relationship between input and output variables changes and is not represented by the model anymore.	Updating/changing the model

	carat	color	clarity	depth	Table	price	x	y	z	target
0	0.23	E	SI2	61.5	55.0	326	3.95	3.98	2.43	Gold
1	0.21	E	SI1	59.8	61.0	326	3.89	3.84	2.31	Gold
2	0.23	E	VS1	56.9	65.0	327	4.05	4.07	2.31	Silver
3	0.29	I	VS2	62.4	58.0	334	4.2	4.23	2.63	Gold
4	0.31	J	SI2	63.3	58.0	335	4.34	4.35	2.75	Silver
5	0.24	J	VVS2	62.8	57.0	336	3.94	3.96	2.48	Gold
6	0.24	I	VVS1	62.3	57.0	336	3.95	3.98	2.47	Gold
7	0.26	H	SI1	61.9	55.0	337	4.07	4.11	2.53	Gold
8	0.22	E	VS2	65.1	61.0	337	3.87	3.78	2.49	Silver

Chapter 9: Comet for Natural Language Processing



PretrainedModel

6/10/22 03:01 PMJupyter interactive00:01:07

Reproduce

Archive

Move

Tag

Charts

Panels

Code

Hyperparameters

Metrics

Graph Definition

Output

System Metrics

Installed Packages

Notes

Graphics

Metrics

Search metric name

Decimal Precision

17

Add Metric

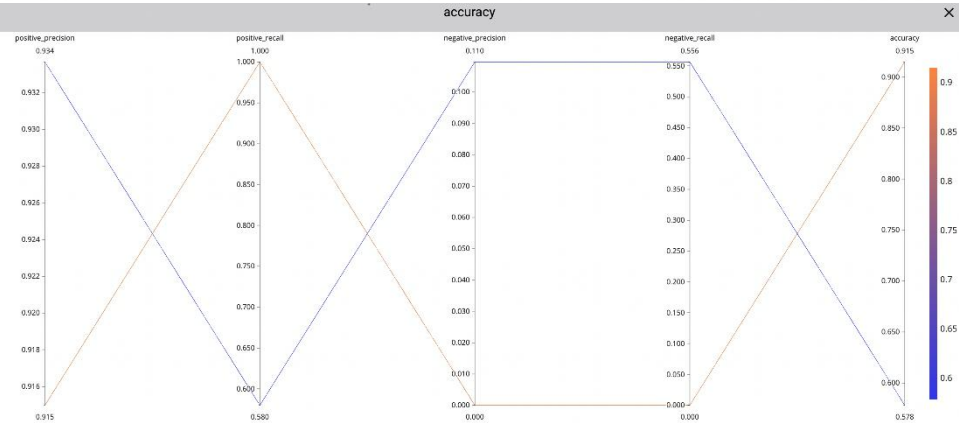
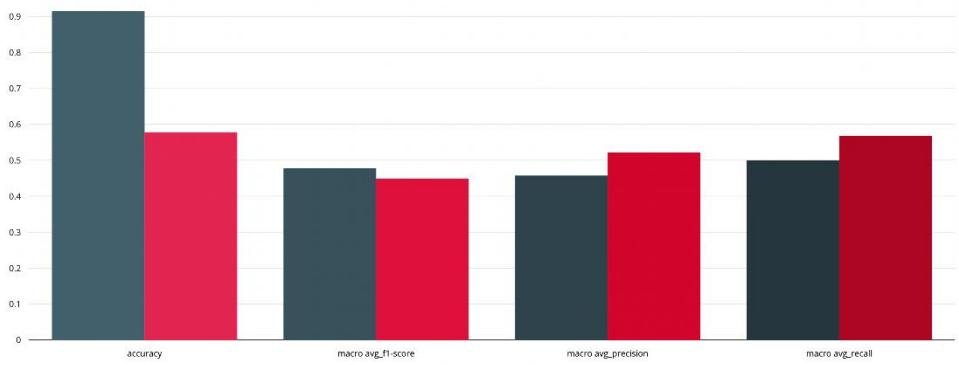
Name	Last			Min			Max		
	Value	Step	Time	Value	Step	Time	Value	Step	Time
accuracy	0.578		6/10/22 03:01 PM	0.578		6/10/22 03:01 PM	0.578		6/10/22 03:01 PM
macro avg_f1-score	0.449		6/10/22 03:01 PM	0.449		6/10/22 03:01 PM	0.449		6/10/22 03:01 PM
macro avg_precision	0.521		6/10/22 03:01 PM	0.521		6/10/22 03:01 PM	0.521		6/10/22 03:01 PM
macro avg_recall	0.568		6/10/22 03:01 PM	0.568		6/10/22 03:01 PM	0.568		6/10/22 03:01 PM
macro avg_support	42704		6/10/22 03:01 PM	42704		6/10/22 03:01 PM	42704		6/10/22 03:01 PM
micro avg_f1-score	0.578		6/10/22 03:01 PM	0.578		6/10/22 03:01 PM	0.578		6/10/22 03:01 PM
micro avg_precision	0.578		6/10/22 03:01 PM	0.578		6/10/22 03:01 PM	0.578		6/10/22 03:01 PM
micro avg_recall	0.578		6/10/22 03:01 PM	0.578		6/10/22 03:01 PM	0.578		6/10/22 03:01 PM

Macro Performance Metrics

x:last(accuracy)

x:last(macro avg_f1_score)

x:last(macro avg_precision)

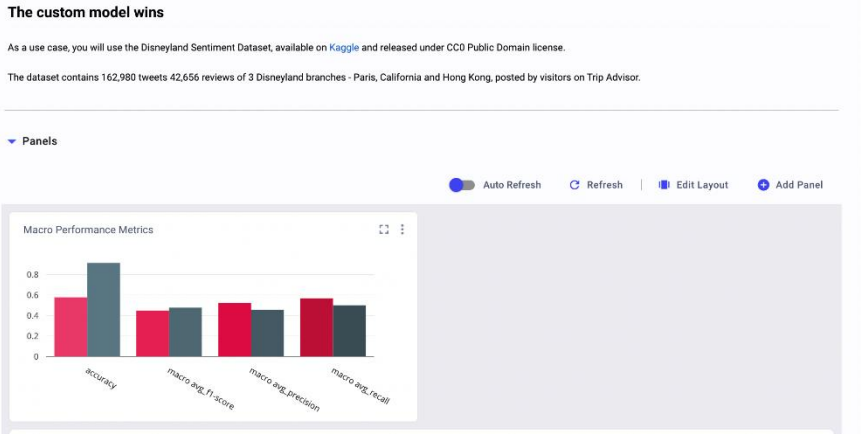


Project Summary						
Metric	Count		Min	Max	Mean	Median
accuracy	2	Value	0.95	0.95	0.95	0.95
		Steps	1	1	1	1
macro avg_f1-score	2	Value	0.49	0.49	0.49	0.49
		Steps	1	1	1	1
macro avg_precision	2	Value	0.47	0.47	0.47	0.47
		Steps	1	1	1	1
macro avg_recall	2	Value	0.5	0.5	0.5	0.5
		Steps	1	1	1	1
macro avg_support	2	Value	205	205	205	205
		Steps	1	1	1	1

Analysis of Disneyland Sentiment using two models

A comparison between two versions of the Vivekn Sentiment model, one pretrained with generic values, and the other trained with the dataset used in the example.

By alod83

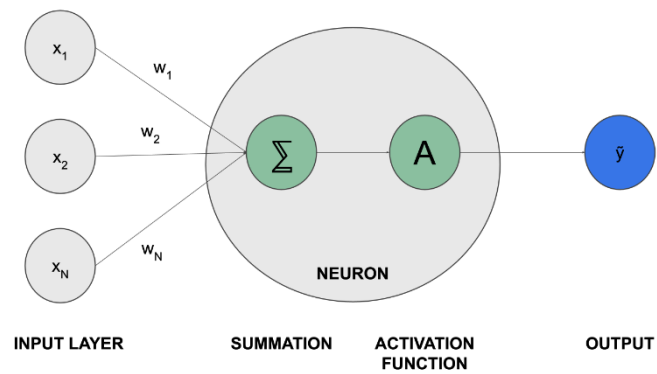
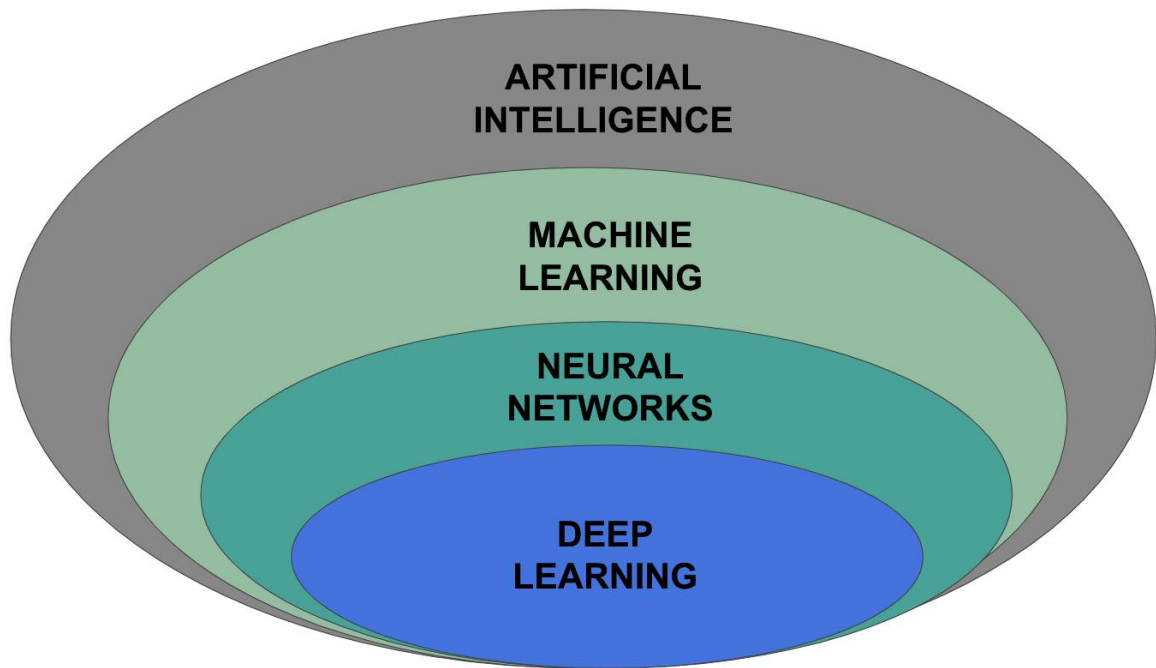


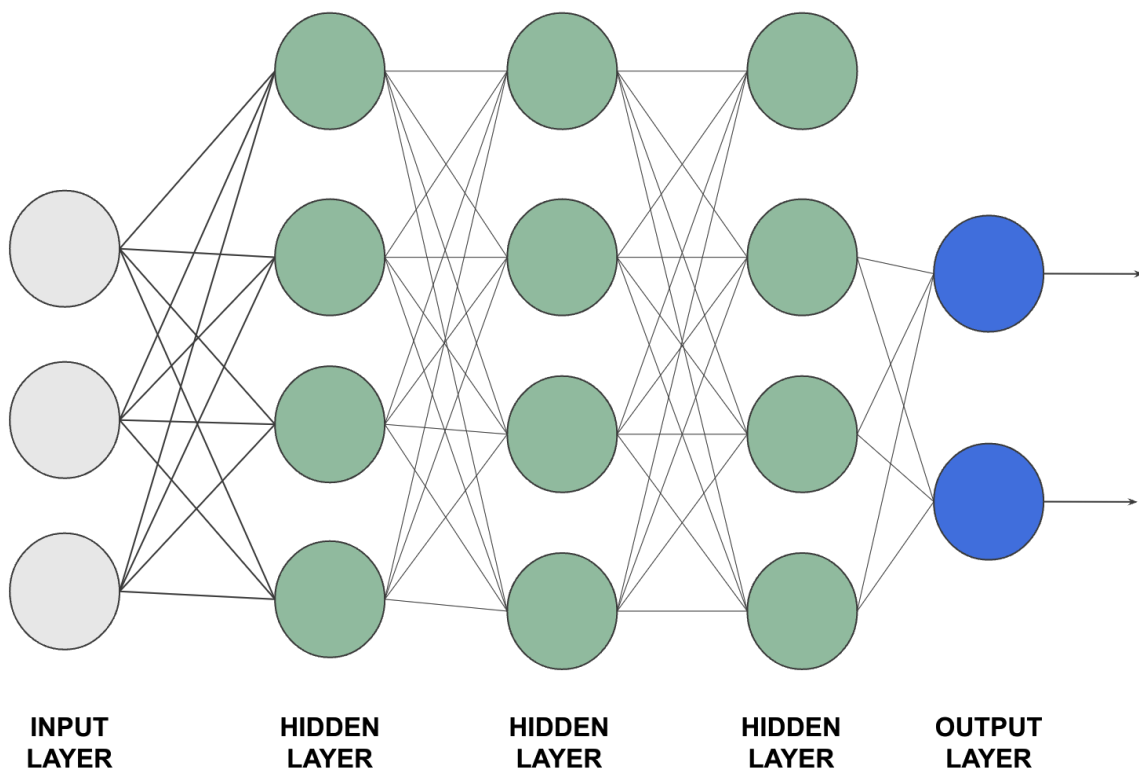
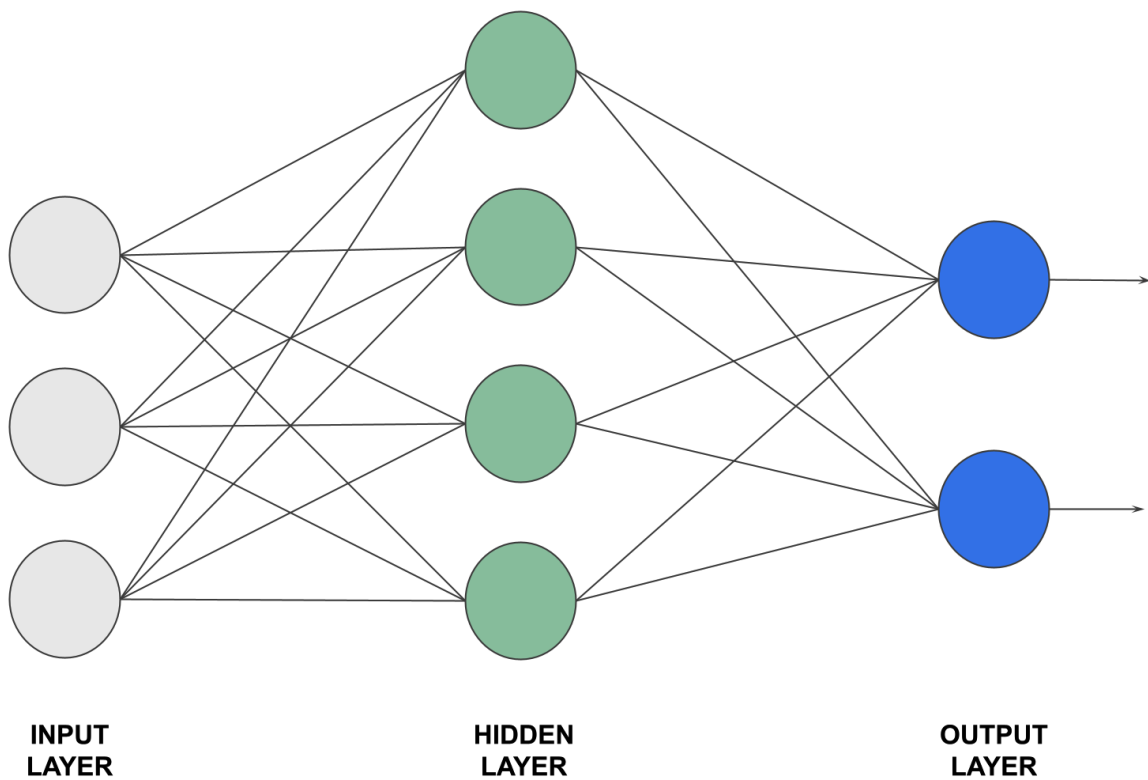
Sentence splitting	Stop words removal	Tokenization	PoS tagging	NER
Yesterday I went to Rome.	Yesterday I went to Rome	Yesterday	Noun	Rome
		I	Pronoun	
		went	Verb	
		to	Preposition	
		Rome	Noun	
I visited the Colosseum.	I visited the Colosseum	I	Pronoun	Colosseum
		visited	Verb	
		the	Determiner	
		Colosseum	Noun	

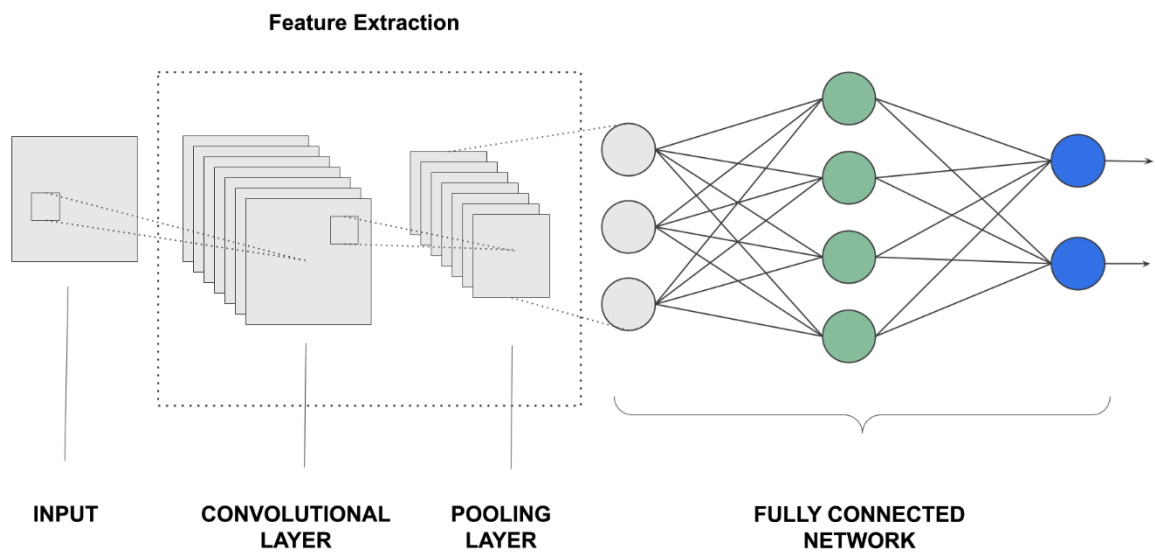
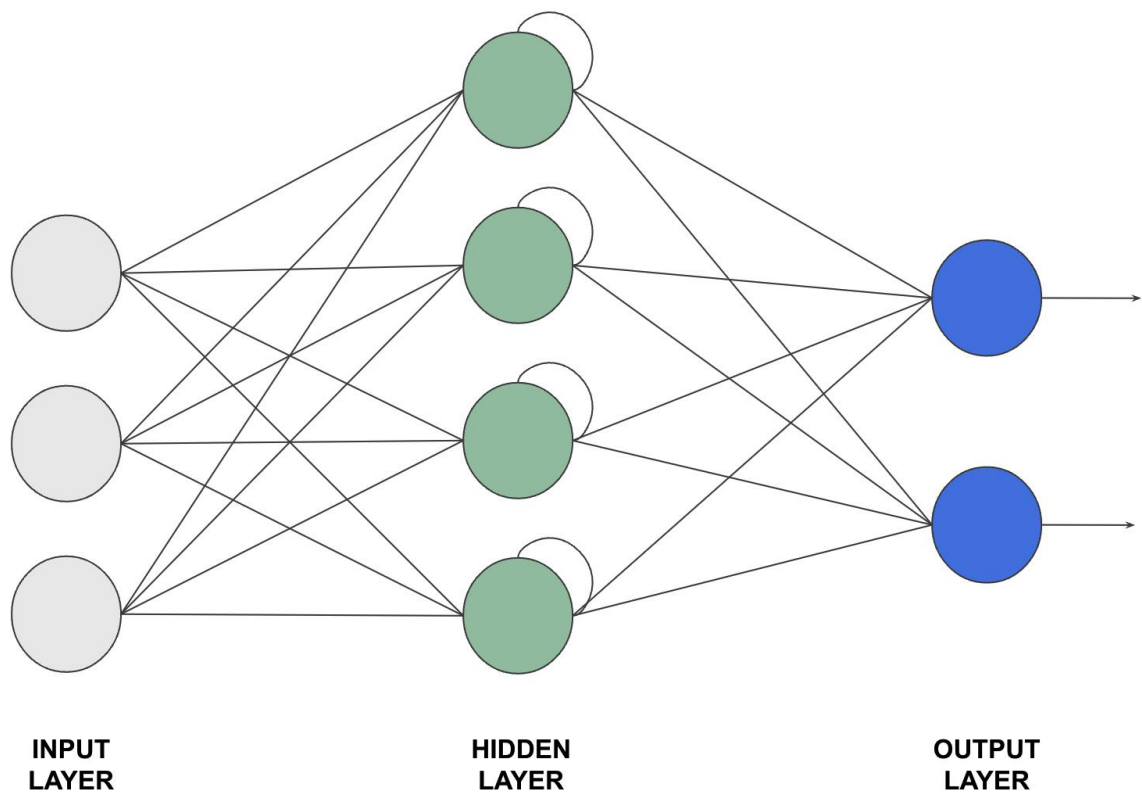
Review text	Rating
If you've ever been to Disneyland anywhere you'll find Disneyland Hong Kong very similar in the layout when you walk into main street! It has a very familiar feel. One of the rides its a Small World is absolutely fabulous and worth doing. The day we visited was fairly hot and relatively busy but the queues moved fairly well.	4
Its been a while since d last time we visit HK Disneyland .. Yet, this time we only stay in Tomorrowland .. AKA Marvel land!Now they have Iron Man Experience n d Newly open Ant Man n d Wasp!!Ironman .. Great feature n so Exciting, especially d whole scenery of HK (HK central area to Kowloon)!Antman .. Changed by previous Buzz lightyear! More or less d same, but I'm expecting to have something most!!However, my boys like it!!Space Mountain .. Turns into Star Wars!! This 1 is Great!!!For cast members (staffs) .. Felt bit MINUS point from before!!! Just dun feel like its a Disney brand!! Seems more local like Ocean Park or even worst!!They got no SMILING face, but just wanna u to enter n attraction n leave!!Hello this is supposed to be Happiest Place on Earth brand!! But, just really Dont feel it!!Bakery in Main Street now have more attractive delicacies n Disney theme sweets .. These are Good Points!!Last, they also have Starbucks now inside the theme park!!	4

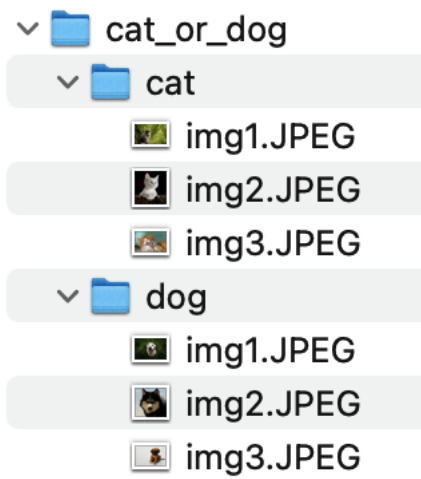
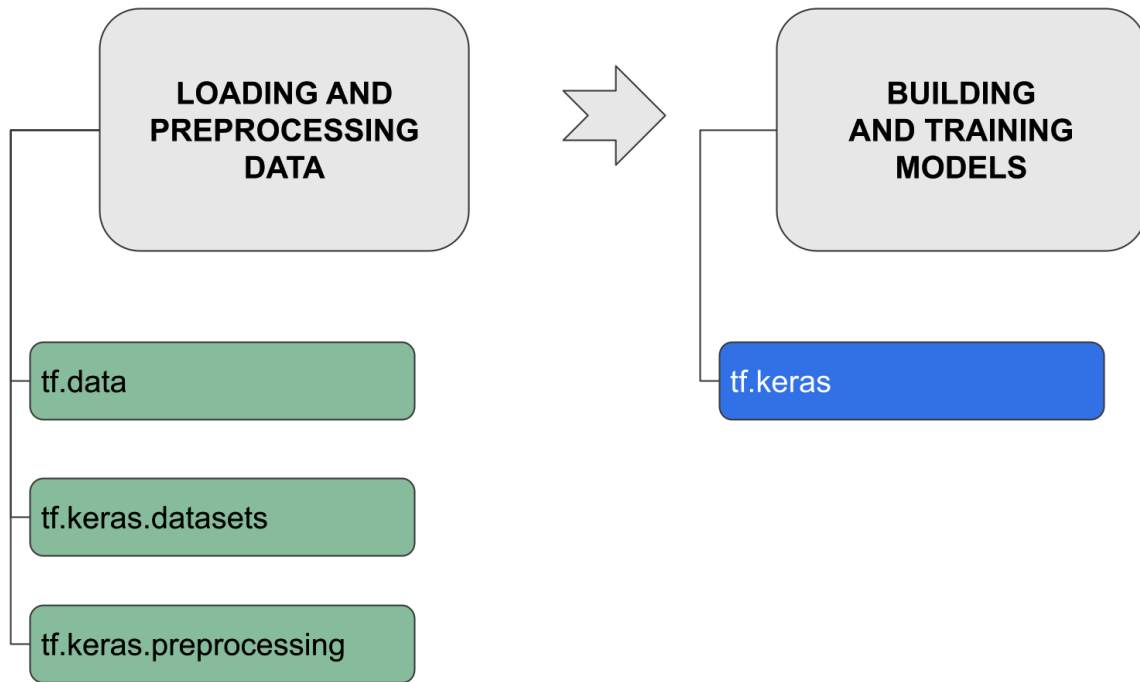
Review_Text	sentiment	final_sentiment
If you've ever been to Disneyland anywhere you'll find Disneyland Hong Kong very similar in the layout when you walk into main street! It has a very familiar feel. One of the rides its a Small World is absolutely fabulous and worth doing. The day we visited was fairly hot and relatively busy but the queues moved fairly well.	positive	[positive]
Its been a while since d last time we visit HK Disneyland .. Yet, this time we only stay in Tomorrowland .. AKA Marvel land!Now they have Iron Man Experience n d Newly open Ant Man n d Wasp!!Ironman .. Great feature n so Exciting, especially d whole scenery of HK (HK central area to Kowloon)!Antman .. Changed by previous Buzz lightyear! More or less d same, but I'm expecting to have something most!!However, my boys like it!!Space Mountain .. Turns into Star Wars!! This 1 is Great!!!For cast members (staffs) .. Felt bit MINUS point from before!!! Just dun feel like its a Disney brand!! Seems more local like Ocean Park or even worst!!They got no SMILING face, but just wanna u to enter n attraction n leave!!Hello this is supposed to be Happiest Place on Earth brand!! But, just really Dont feel it!!Bakery in Main Street now have more attractive delicacies n Disney theme sweets .. These are Good Points!!Last, they also have Starbucks now inside the theme park!!	positive	[positive]

Chapter 10: Comet for Deep Learning









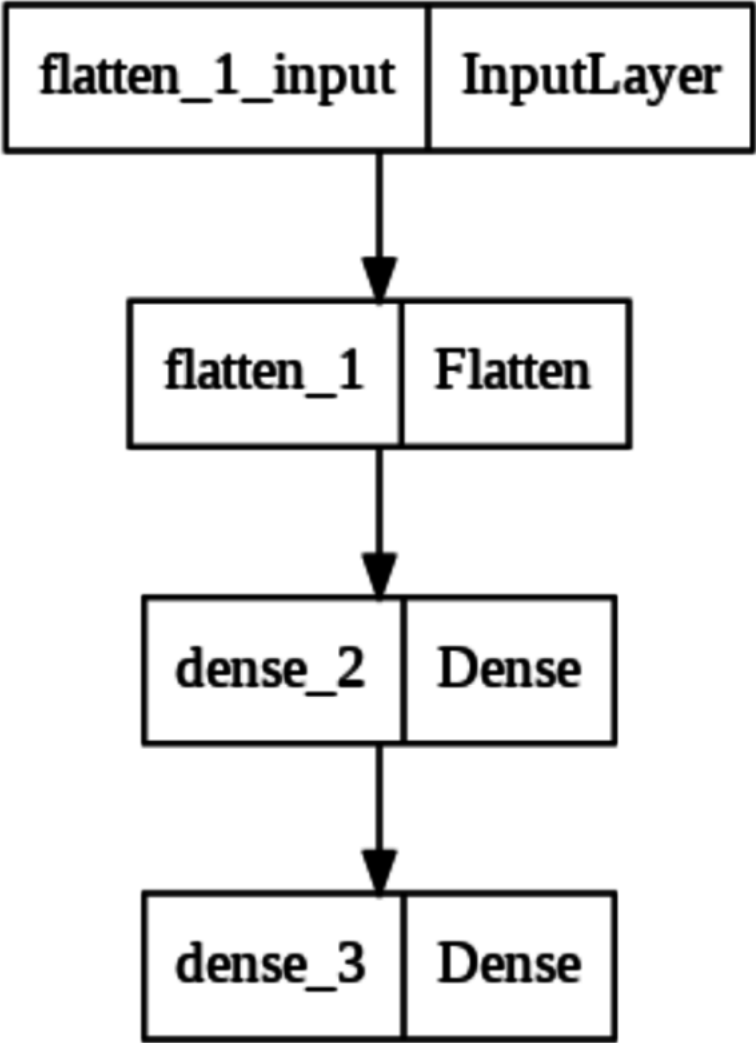


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dense (Dense)	(None, 32)	25120
dense_1 (Dense)	(None, 10)	330

=====
 Total params: 25,450
 Trainable params: 25,450
 Non-trainable params: 0

None



Reproduce

Archive

Move

Tag

Charts

Panels

Code

Hyperparameters

Metrics

Graph Definition

Output

System Metrics

Installed Packages

Notes

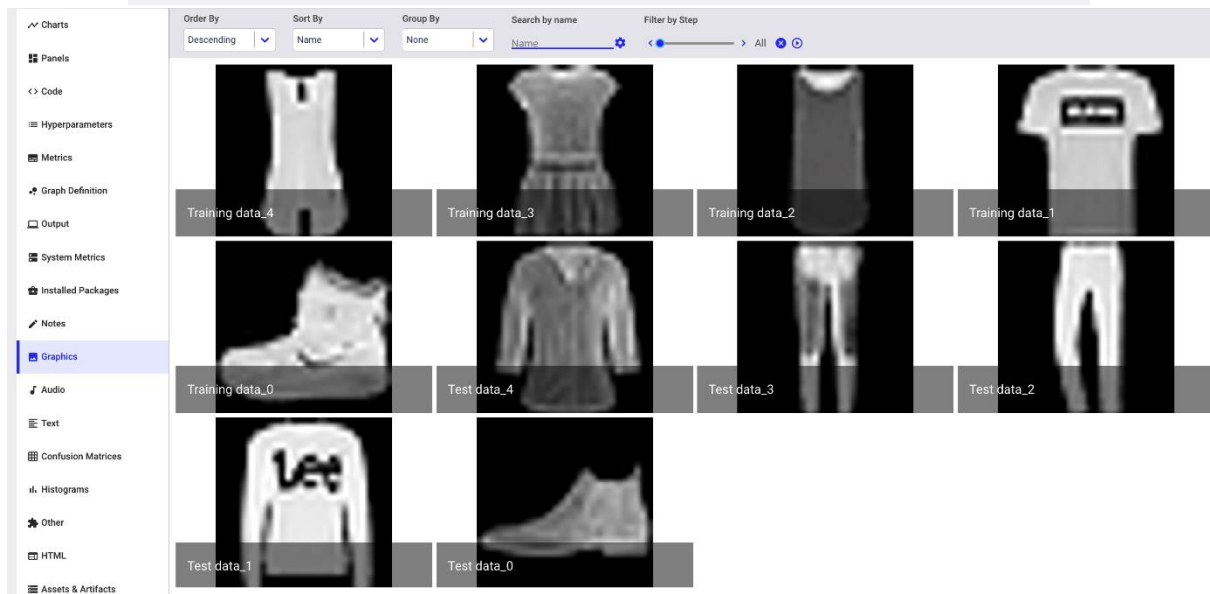
Graphics

Audio

Text

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batch_accuracy	0.734	17187	6/21/22 03:21 PM	0.156	1	6/21/22 03:20 PM	0.812	10941	6/21/22 03:20 PM
batch_loss	0.65	17187	6/21/22 03:21 PM	0.493	8753	6/21/22 03:20 PM	196.876	1	6/21/22 03:20 PM
epoch_duration	4.871	17504	6/21/22 03:21 PM	4.789	13128	6/21/22 03:20 PM	5.968	2188	6/21/22 03:20 PM
loss	0.651	17504	6/21/22 03:21 PM	0.651	17504	6/21/22 03:20 PM	2.243	2188	6/21/22 03:20 PM
val_accuracy	0.731	17504	6/21/22 03:21 PM	0.518	2188	6/21/22 03:20 PM	0.731	17504	6/21/22 03:20 PM
val_loss	0.727	17504	6/21/22 03:21 PM	0.691	15316	6/21/22 03:20 PM	1.321	2188	6/21/22 03:20 PM
validate_batch_accuracy	0.731	17502	6/21/22 03:21 PM	0.468	1876	6/21/22 03:20 PM	0.769	15014	6/21/22 03:20 PM
validate_batch_loss	0.728	17502	6/21/22 03:21 PM	0.612	15014	6/21/22 03:20 PM	1.358	1906	6/21/22 03:20 PM

Name	Last			Min			Max		
	Value	Step	Time	Value	Step	Time	Value	Step	Time
accuracy	0.734	17504	6/21/22 03:21 PM	0.415	2188	6/21/22 03:20 PM	0.734	17504	6/21/22 03:20 PM
batch_accuracy	0.734	17187	6/21/22 03:21 PM	0.156	1	6/21/22 03:20 PM	0.812	10941	6/21/22 03:20 PM
batch_loss	0.65	17187	6/21/22 03:21 PM	0.493	8753	6/21/22 03:20 PM	196.876	1	6/21/22 03:20 PM
epoch_duration	4.871	17504	6/21/22 03:21 PM	4.789	13128	6/21/22 03:20 PM	5.968	2188	6/21/22 03:20 PM
loss	0.651	17504	6/21/22 03:21 PM	0.651	17504	6/21/22 03:20 PM	2.243	2188	6/21/22 03:20 PM
val_accuracy	0.731	17504	6/21/22 03:21 PM	0.518	2188	6/21/22 03:20 PM	0.731	17504	6/21/22 03:20 PM
val_loss	0.727	17504	6/21/22 03:21 PM	0.691	15316	6/21/22 03:20 PM	1.321	2188	6/21/22 03:20 PM
validate_batch_accuracy	0.731	17502	6/21/22 03:21 PM	0.468	1876	6/21/22 03:20 PM	0.769	15014	6/21/22 03:20 PM
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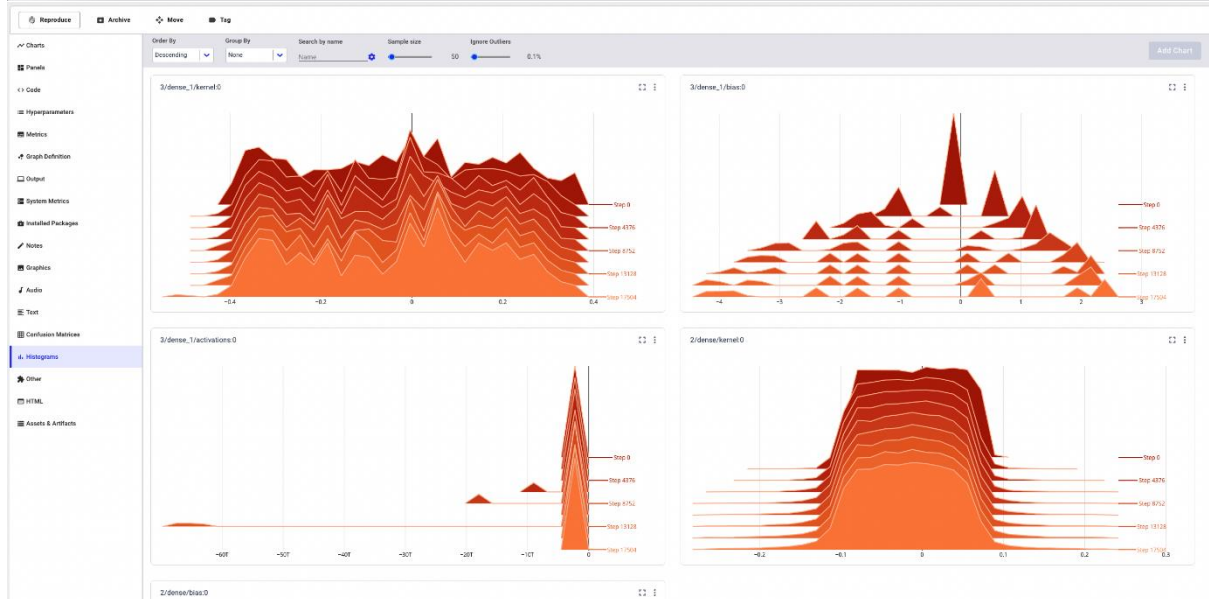


Image Classification

image

Drop Image Here
- or -
Click to Upload

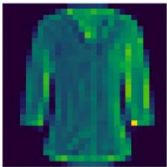
Clear

Submit

output

Flag

image



ClearSubmit

output

T-shirt/top

T-shirt/top	38%
Shirt	24%
Dress	20%
Coat	14%
Pullover	3%
Bag	1%
Trouser	0%
Ankle boot	0%

Comet Image Viewer

Filter by experiment:All Experiments

Filename matches: .Apply



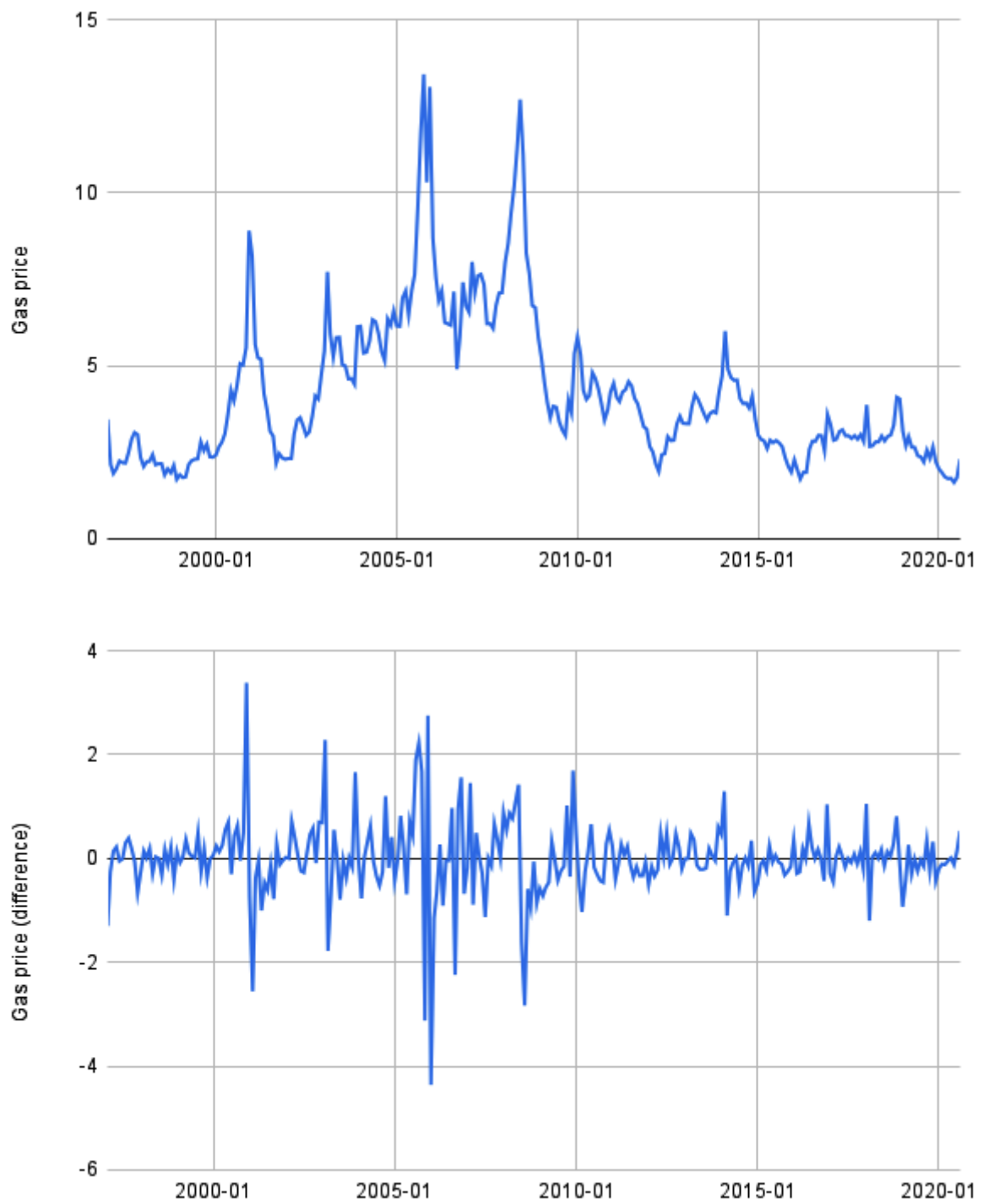


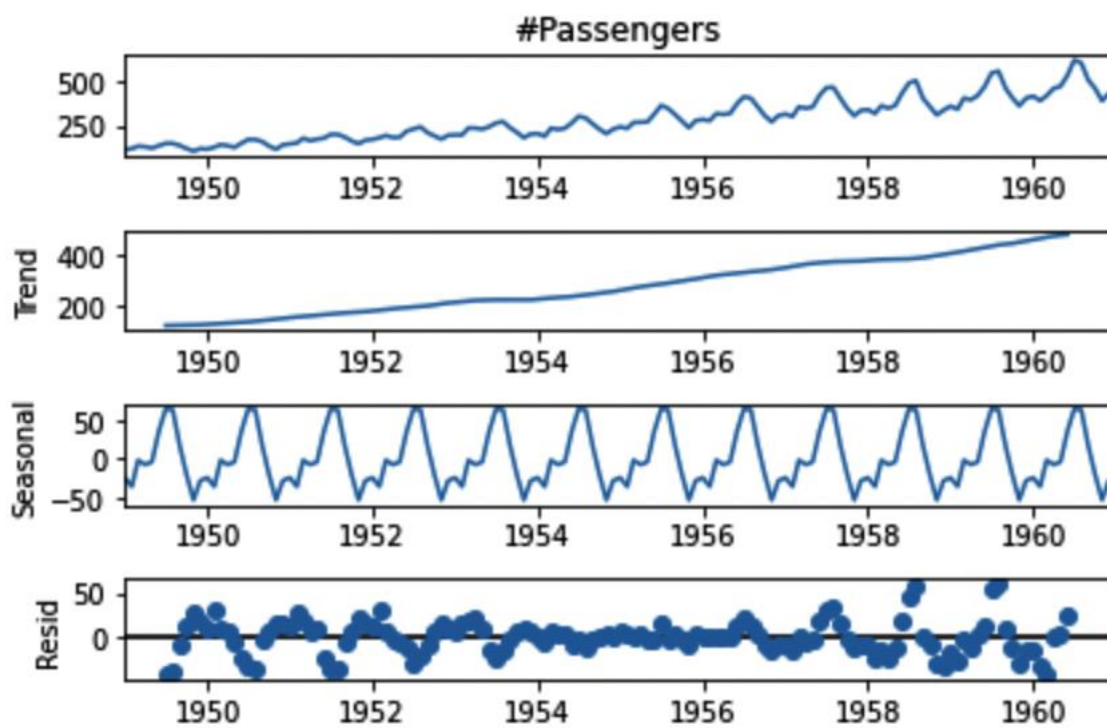
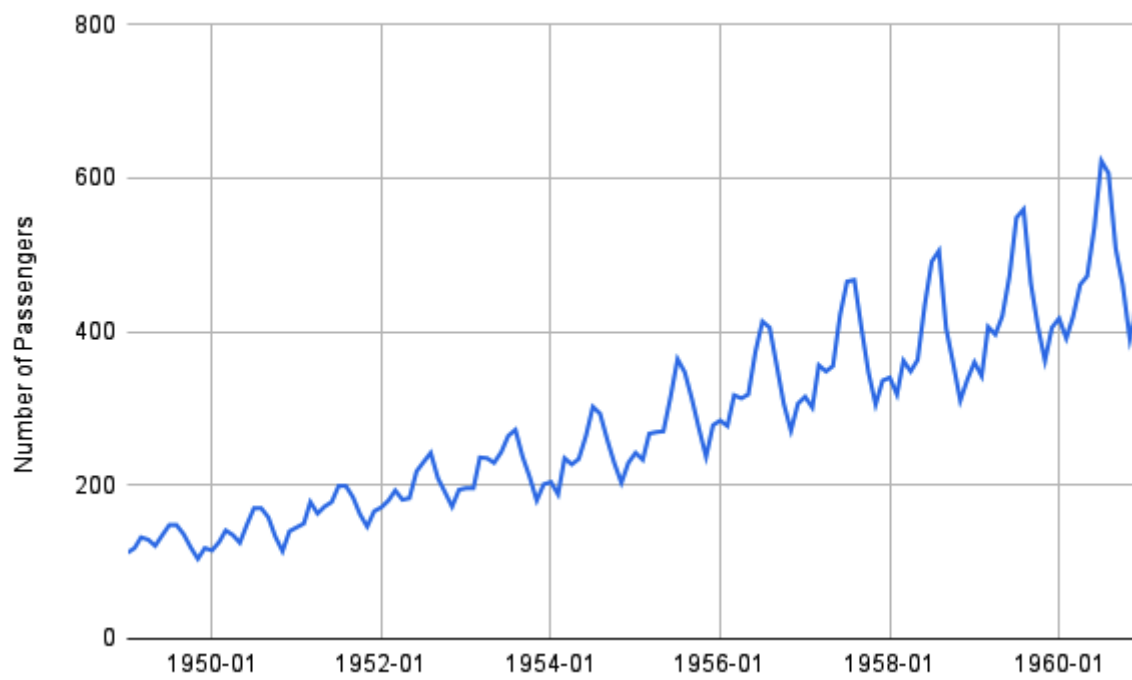


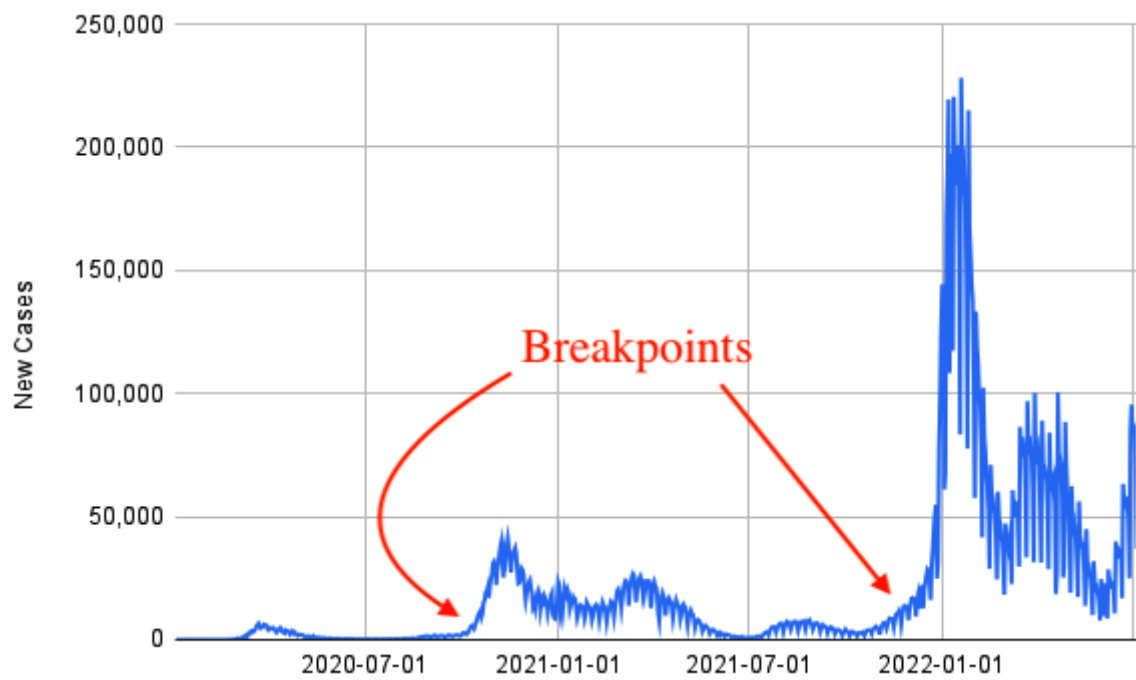
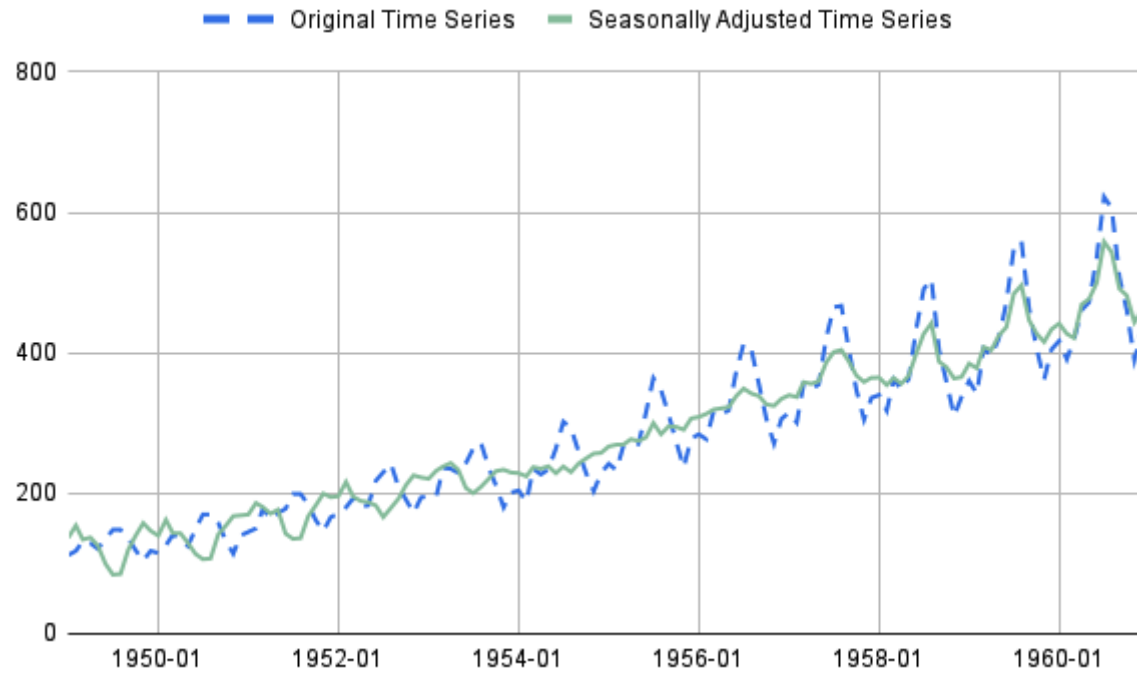


Label	Class
0	T-shirt/top
1	Trouser
2	Pullover
3	Dress
4	Coat
5	Sandal
6	Shirt
7	Sneaker
8	Bag
9	Ankle boot

Chapter 11: Comet for Time Series Analysis







Search...

Integrations

Settings & members

Workspace

User Analytics

Finance

Welcome

Next Steps

Private

Explore

Chat & resources

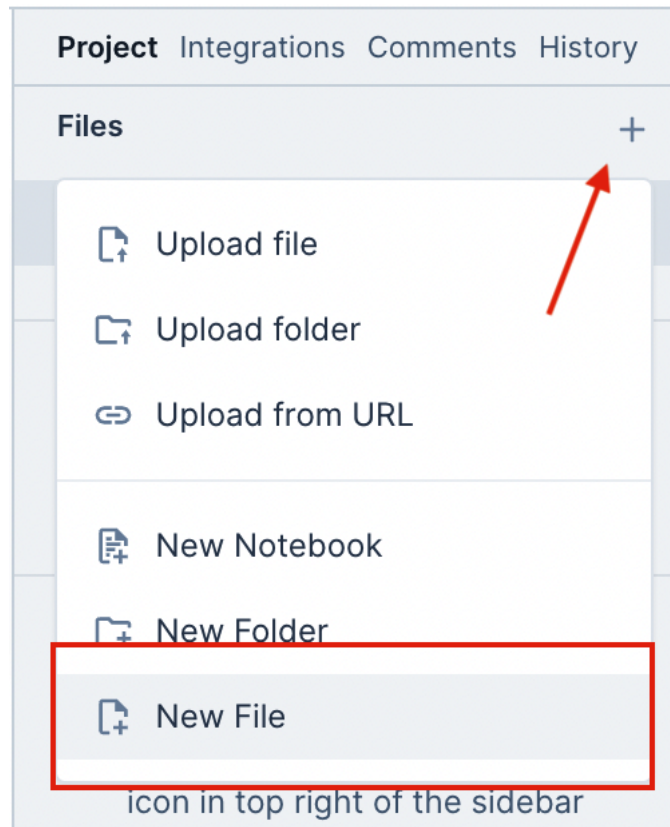
Leave feedback

Deepnote

Filter...

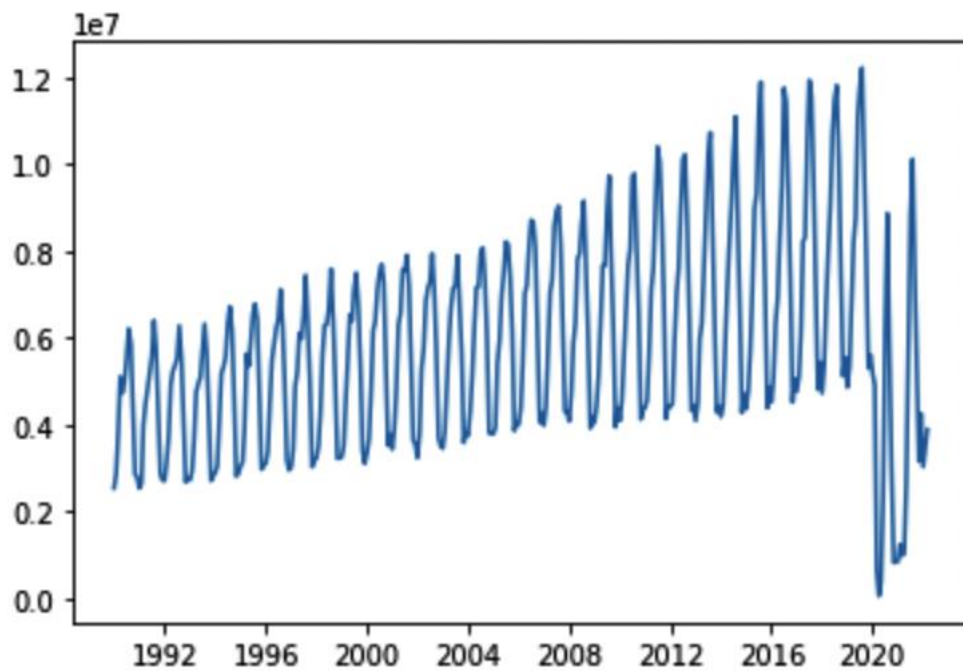
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User Analytics	-	-	-	-	...
Finance	-	-	-	-	...
Welcome	Idle	Workspace	alod83 Created 30 minutes ago	No recent activity	...
Next Steps	Idle	Workspace	alod83 Created 30 minutes ago	No recent activity	...

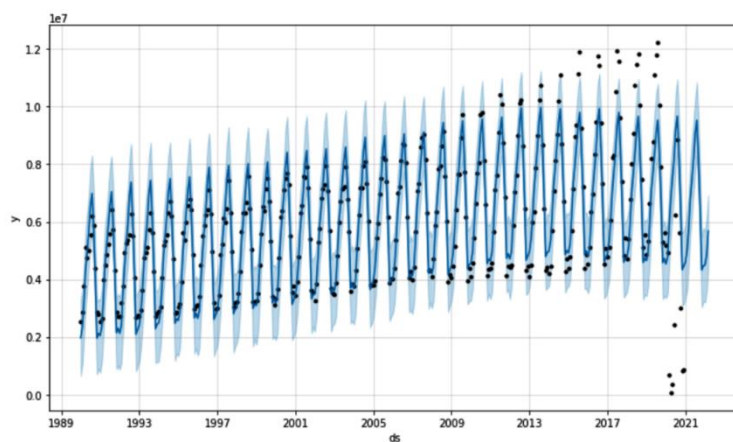


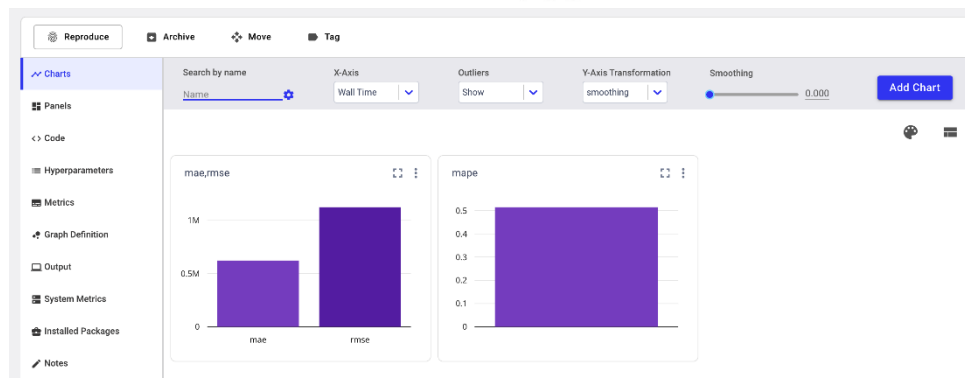
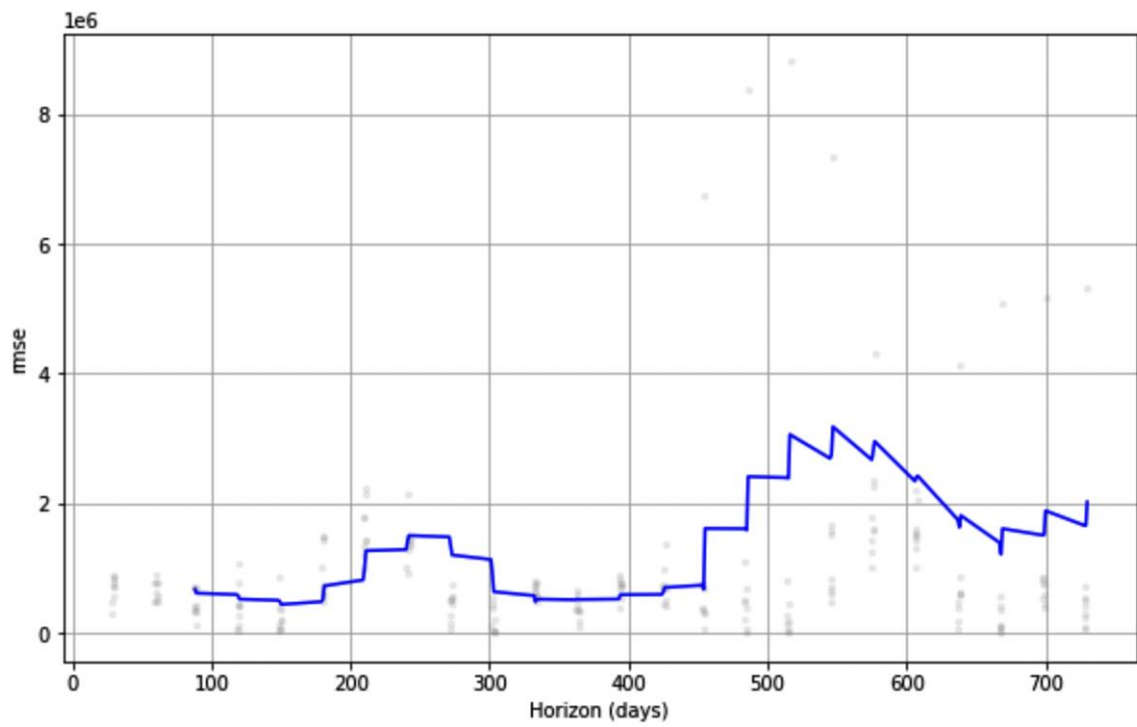
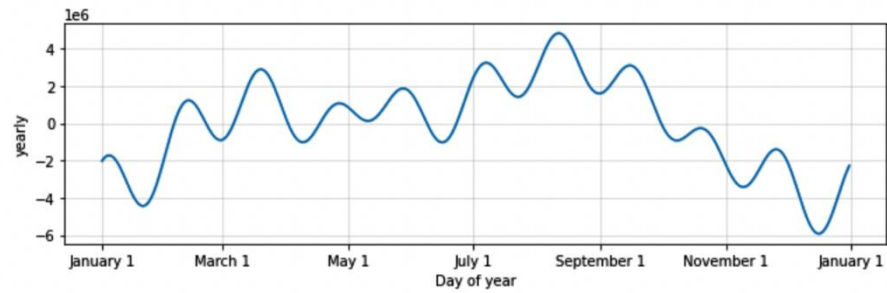
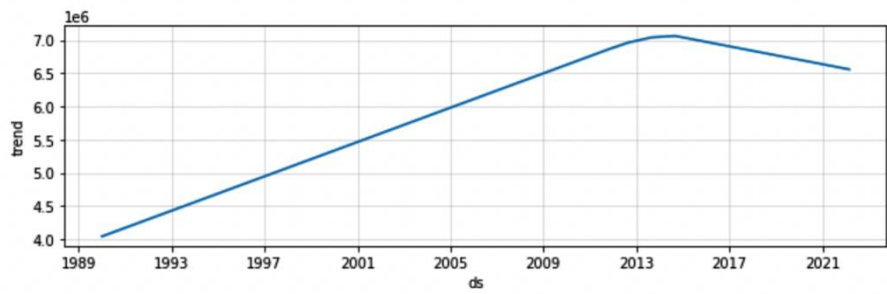
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3	1990-04-01	5107712.0
4	1990-05-01	4738376.0



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ReproduceArchiveMoveTag

ChartsPanelsCodeHyperparametersMetricsGraph DefinitionOutputSystem MetricsInstalled PackagesNotesGraphicsAudioText

Hyperparameters

Search parameter name

Key	Value
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changepoint_range	0.8
changepoints	null
daily_seasonality	false
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growth	linear
holidays	null
holidays_prior_scale	10.0
interval_width	0.8

ChartsPanelsCodeHyperparametersMetricsGraph DefinitionOutput

Metrics

Search metric name

Decimal Precision 16

Add Metric

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	Value	Step	Time	Value	Step	Time	Value	Step	Time
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rmse	1122600.198		7/7/22 03:15 PM	1122600.198		7/7/22 03:15 PM	1122600.198		7/7/22 03:15 PM

ChartsPanelsCodeHyperparametersMetricsGraph DefinitionOutputSystem MetricsInstalled PackagesNotesGraphicsAudio

Order By: DescendingSort By: NameGroup By: NoneSearch by name: NameFilter by Step: All

prophet-plot-1

prophet-plot_cross_validation...

prophet-plot_components-2

