

Hands-on Lab: Explore a Simple Generative Tool

Estimated time needed: 30 minutes

Overview

Generative AI models have revolutionized how you interact with technology, enabling you to create new content, generate realistic images, and translate languages with remarkable accuracy.

In this lab, you will gain hands-on experience with a simple generative AI tool, DataRobot, exploring its capabilities and applications.

Learning Objectives


After completing this lab, you will be able to:

- Sign up in DataRobot
- Add a data set to the use case
- Work on model building

Task 1: Sign-up in DataRobot

Step 1: Click www.datarobot.com

Step 2: Fill in the required information under the "Start for free" section and create an account.



Platform Solutions Customers Partners Resources Company

Support

Log In

Contact Us

Book a Demo

Experience the DataRobot AI Platform

Less Friction, More AI. Get Started Today With a Free 30-Day Trial.

Unleash your skills and embark on a new era of AI with a single platform that streamlines your predictive and generative AI workflows.

Start your free 30 day trial to:

- ✓ Experience how to fast-track preparing data, running experiments, and testing your models
- ✓ See how you can finally automate all your AI Experimentation and AI Production processes in a single solution
- ✓ Build predictive and generative AI use-cases all in a single platform
- ✓ Learn how to accelerate your AI plans with hands-on labs, use-case code snippets, and an AI expert community

Start For Free

First Name *

Last Name *

Business Email *

Phone

Company *


Job Title *


Country *

☐ Yes! Please email me news and

Step 4: A new window will open; select the relevant option for signing up.

Welcome back to DataRobot

 Sign in with Google

 Sign in with GitHub


or

Email

example@email.com

Password

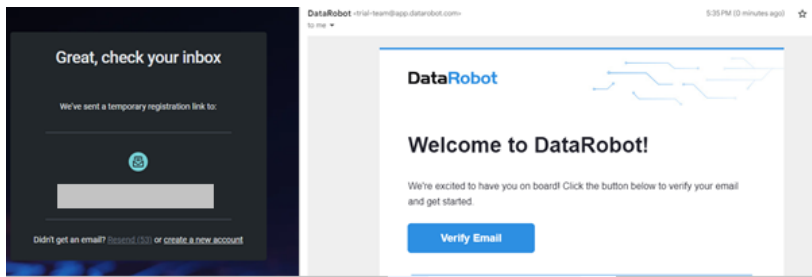
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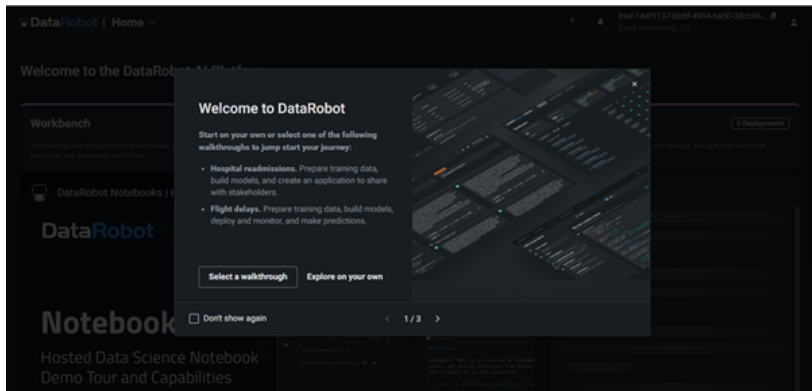
Reset password

Sign in

Step 5: Confirm your email by clicking **Verify Email** in your inbox.

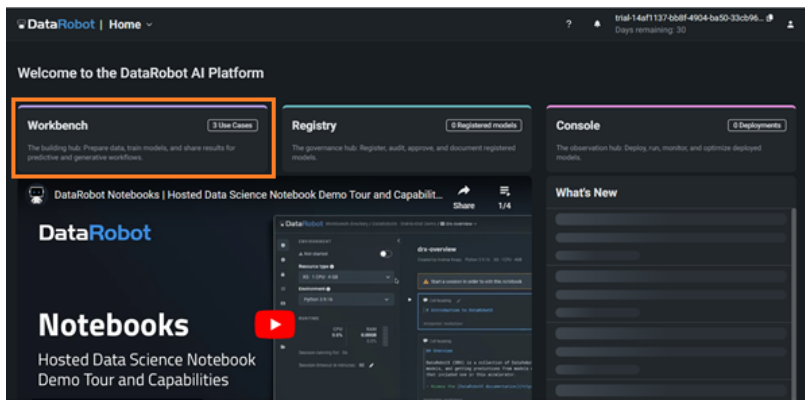


Step 6: Sign up and start your first experience of using the Generative AI tool. The dashboard will look like the image below. You may like to familiarize yourself with the application by clicking **Select a walkthrough**.

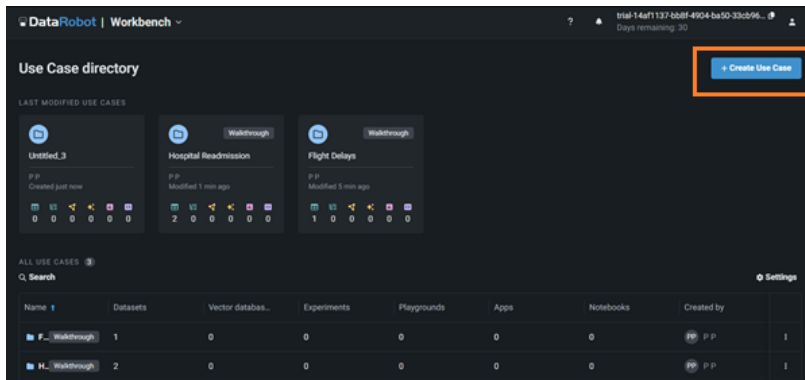


Task 2: Add a data set

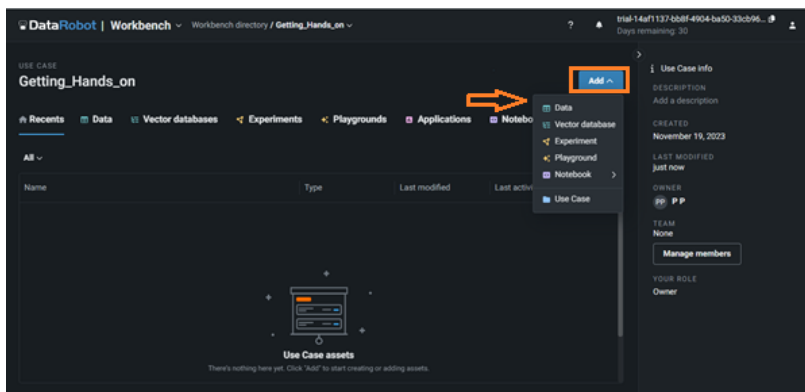
Step 7: The dashboard will appear shortly, and your screen will look as shown below. Click **Workbench**.



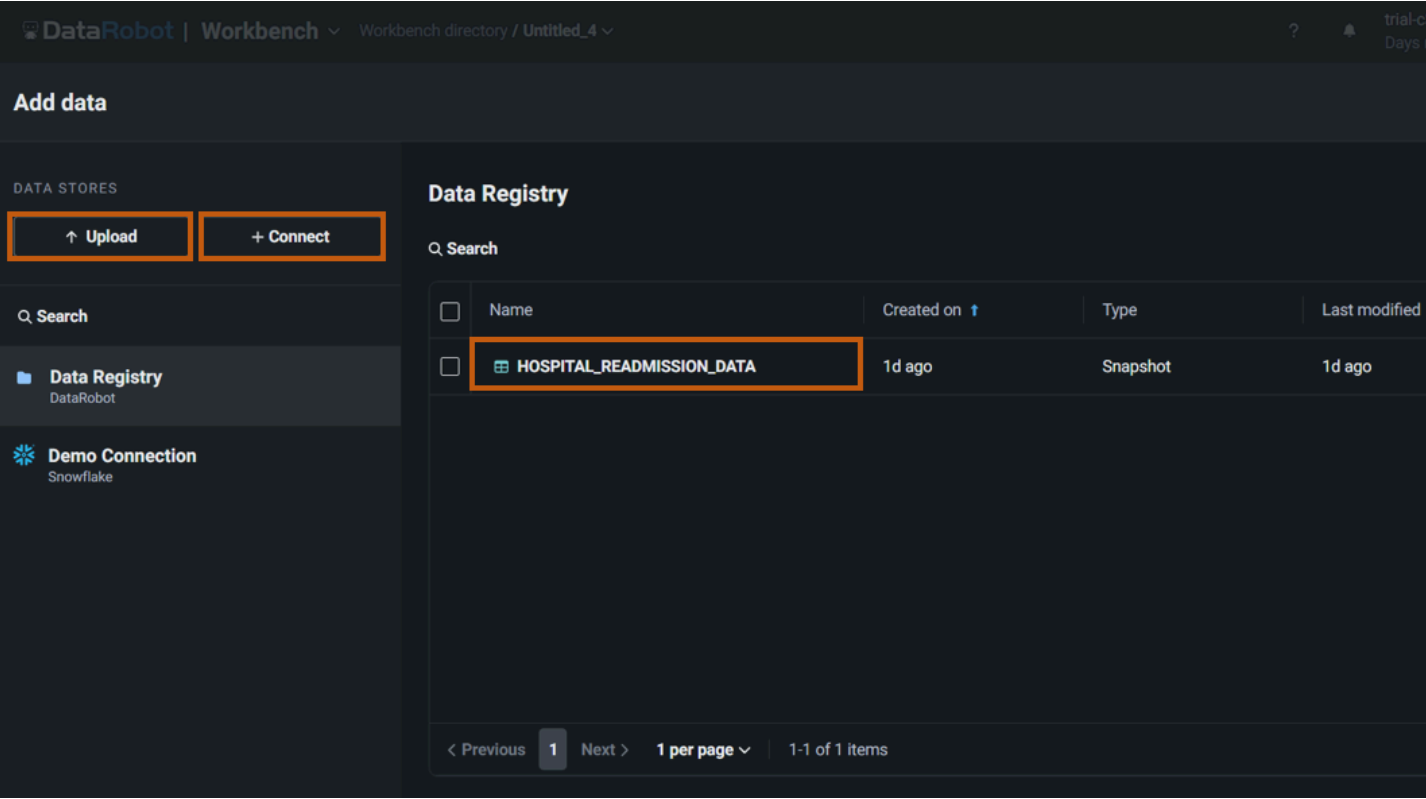
Step 8: Click **Create Use Case**.



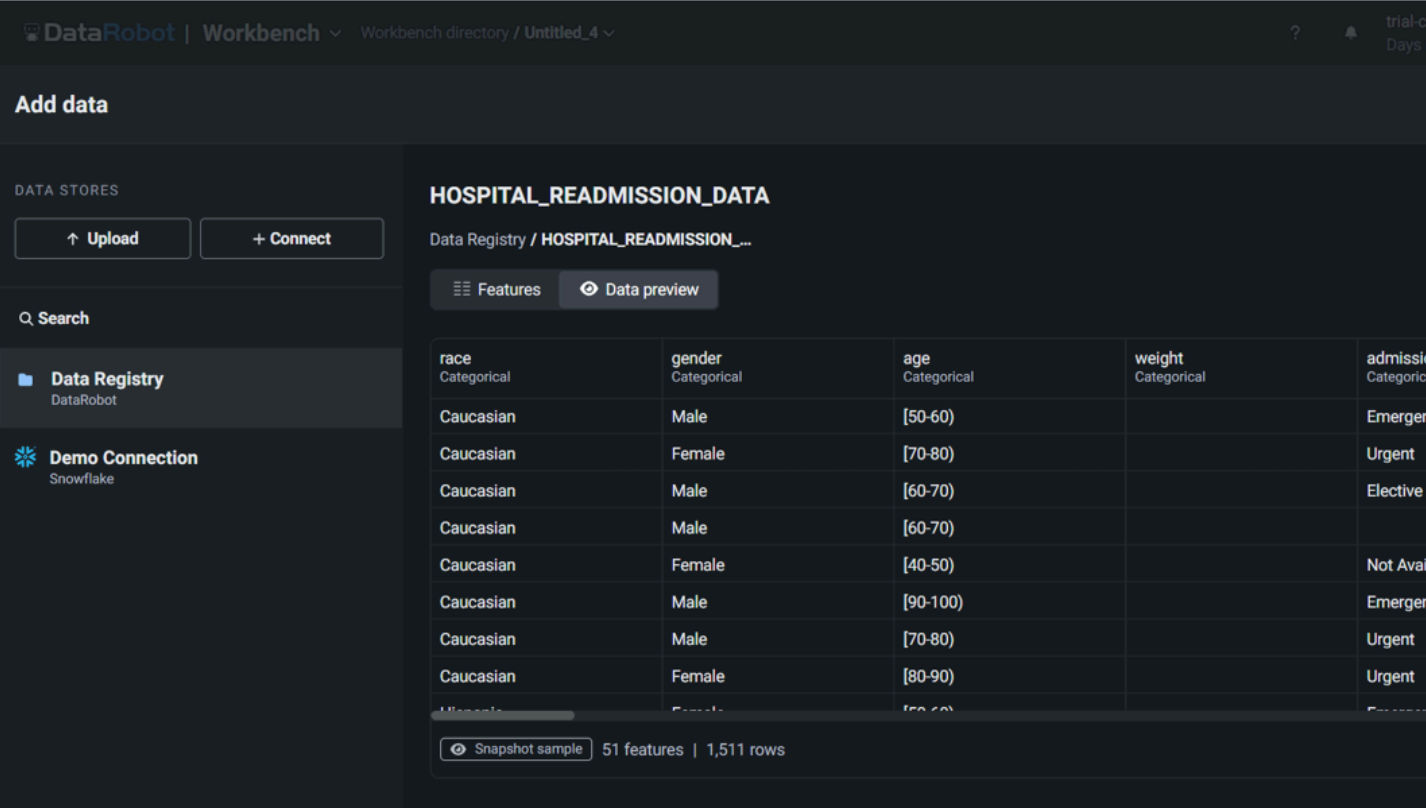
Step 9: Click **Add** and **Data** to include the data set in your use case.



Step 10: **Upload** your data set or **Connect** to the data source; however, for this lab, you can select an in-built sample data set *HOSPITAL_READMISSION_DATA*.



Step 11: Once you select the data set, you can see a preview of it. You can also view the data set's features, as shown below. Click **Add to Use Case**.



Step 12: After you add the data set to the use case, the workbench will appear as shown below. You can click the data set to see the feature insights.

DataRobot | Workbench Workbench directory / Untitled_4

< Use Case directory

USE CASE

Untitled_4

Add Data

All Data 1 Vector databases Experiments Playgrounds Applications

Type Q Search Settings

Name	Created By	Last Modified	Type	Source	Rows
HOSPITAL_READMISSION_DATA	PV Pratiksha V.	now	Snapshot	Snowflake	10000

< Previous 1 Next > 1 per page 1-1 of 1 items

Step 13: Explore the **All Features** menu to display specific features.

DataRobot | Workbench Workbench directory / Untitled_4 / HOSPITAL_READMISSION_DATA

HOSPITAL_READMISSION_DATA Jul 29th, 2024 10:39 AM Snapshot Data actions

Data preview **Features** Feature lists

Show insights Show features from: All Features + Create feature list

Search

DATAROBOT FEATURE LISTS

- All Features 51
- Informative Features 40
- Raw Features 51

race	age	weight	admission_type_id	discharge
Caucasian	[70-80]	==Missing==	Emergency	Discharge
AfricanAmerican	[60-70]	[75-100]	Urgent	Discharge
Other	Other	Other	Other	Other
Caucasian	[50-60]		Emergency	Discharge
Caucasian	[70-80]		Urgent	Discharge

Snapshot sample 51 features | 1,511 rows

Task 3: Work on Data Modeling

Step 14: Click **Start**. You will have options **Modelling** and **Start wrangling**. You can try data wrangling if you want to. For this lab, you will work on model building. Click **Start** and select **Modelling**. It will take a while to prepare a data set for modelling.

DataRobot | Workbench

Workbench directory / Untitled_4 / HOSPITAL_READMISSION_DATA

trial-c3398e
Days remain

HOSPITAL_READMISSION_DATA

Jul 29th, 2024 10:39 AM Snapshot

Data actions

Data preview

Features

Feature lists

Show insights

Show features from: All Features

+ Create feature list

race

Categorical

Caucasian 74%

AfricanAmerican 21%

Other 6%

gender

Categorical

Female 54%

Male 46%

age

Categorical

[70-80] 26%

[60-70] 22%

Other 52%

weight

Categorical

==Missing== 96%

[75-100] 2%

Other 2%

admission

Categorical

Emergency 49%

Urgent 19%

Other 32%

Caucasian

Male

[50-60]

Emergency

Discharge

Caucasian

Female

[70-80]

Urgent

Discharge

Caucasian

Male

[60-70]

Emergency

Discharge

Snapshot sample

51 features | 1,511 rows

Step 15: Once done, you need to select the **Target feature**. Select **readmitted** as your target feature.

DataRobot | Workbench

Workbench directory / Untitled_4

trial-c3398e
Days remain

Set up new experiment

Dataset

Target

Additional settings

Target feature

Select the feature to make predictions on.

payer_code

pioglitazone

race

readmitted

repaglinide

troglitazone

tolbutamide

tolazamide

time_in_hospital

	Uniq...	Missi...	Mean	Std Dev
	7	9592	-	-
troglitazone	1	0	-	-
tolbutamide	2	0	-	-
tolazamide	2	0	-	-
time_in_hospital	14	0	4.43	3.021

Experiment

HOSPITAL

07-30 11:2

Dataset

Name

Rows

Features

Target

No target s

Step 16: The workbench screen will be displayed as shown below. Click **Next**.

DataRobot | Workbench Workbench directory / Untitled_4

Set up new experiment

Dataset — Target — Additional settings

Target feature
Select the feature to make predictions on.

readmitted

Target type: Binary classification ⓘ

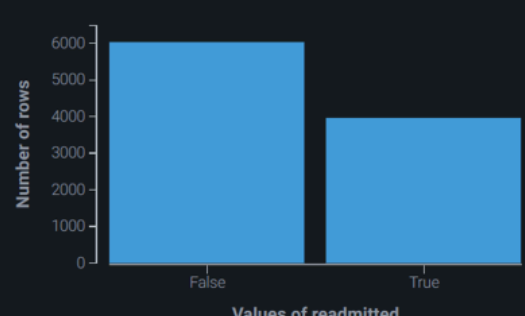
Positive class: ☐ 0 ☒ 1 ⓘ

Modeling mode
Set the mode used for selecting which blueprints to build when training models.

Quick Autopilot

Optimization metric
Set the metric used when training models to evaluate and optimize accuracy.

LogLoss (Accuracy) Recommended



Experiment
HOSPITAL
07-30 11:2

Dataset
Name

Rows
Features

Target
Feature
Target type
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Modeling m
Optimizatio
Training fea

Partitioni

Step 17: You can modify the model setting in **Additional Settings**; once done, click **Next** and then click **Start modelling**.

DataRobot | Workbench Workbench directory / Untitled_4

Set up new experiment

Dataset — Target — Additional settings

Data partitioning **Time series modeling** Preview **Additional settings**

Partitioning method
Select the method for assigning rows to partitions when training models.

Stratified sampling
Rows are assigned to ensure similar target distribution across each partition.

Validation type

☒ **Cross-validation**
Trains models on a specified number of folds, maximizing data use but also increasing run time.

☐ **Training-validation-holdout**
Splits data into three partitions: trains models on the training set, assess performance on the validation set, and evaluates the model on unseen data in the holdout set.

Cross-validation folds
Enter a value from 2 - 50.

Holdout percentage
Set the subset of data that is unavailable during training and validation. Enter a value

Experiment
HOSPITAL
07-30 11:2

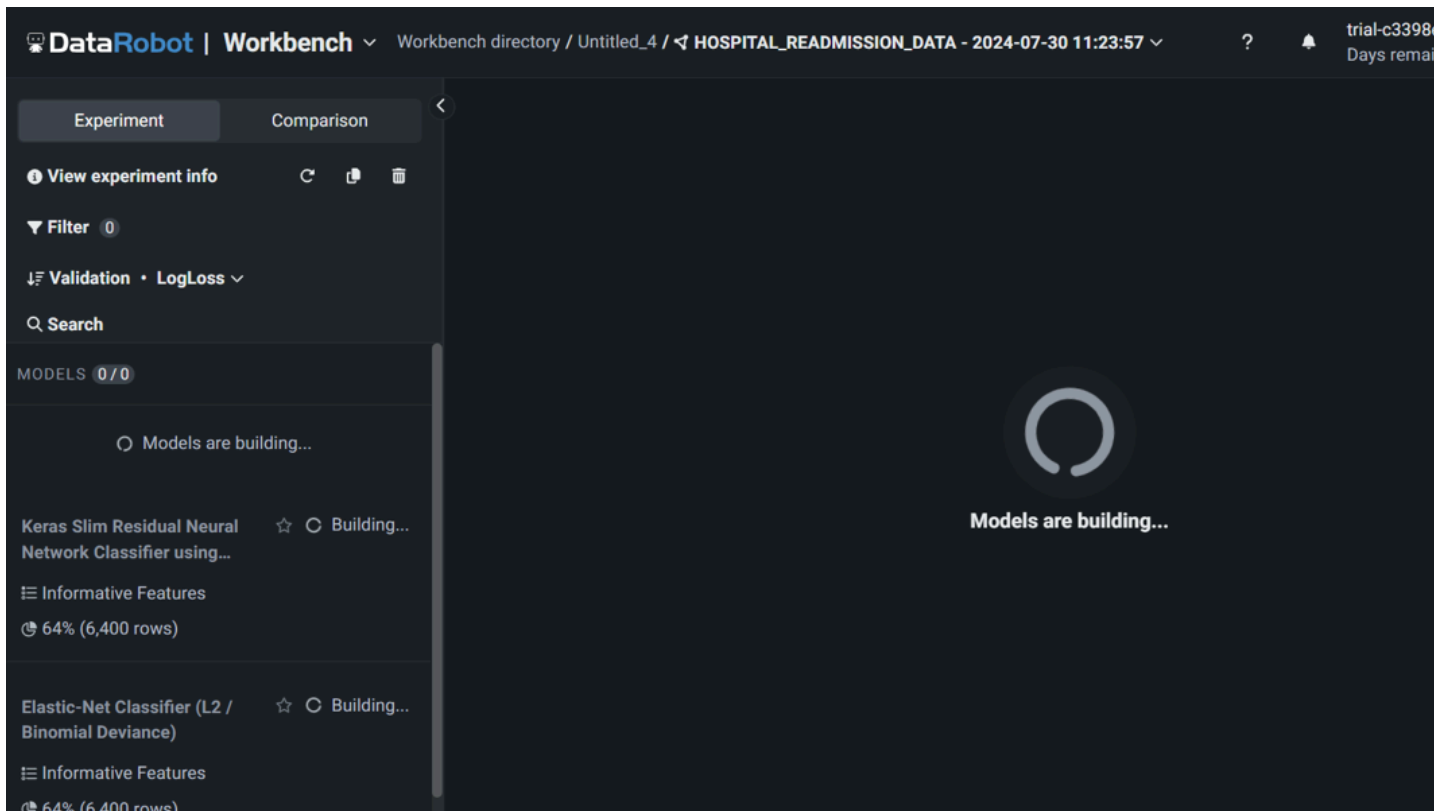
Dataset
Name

Rows
Features

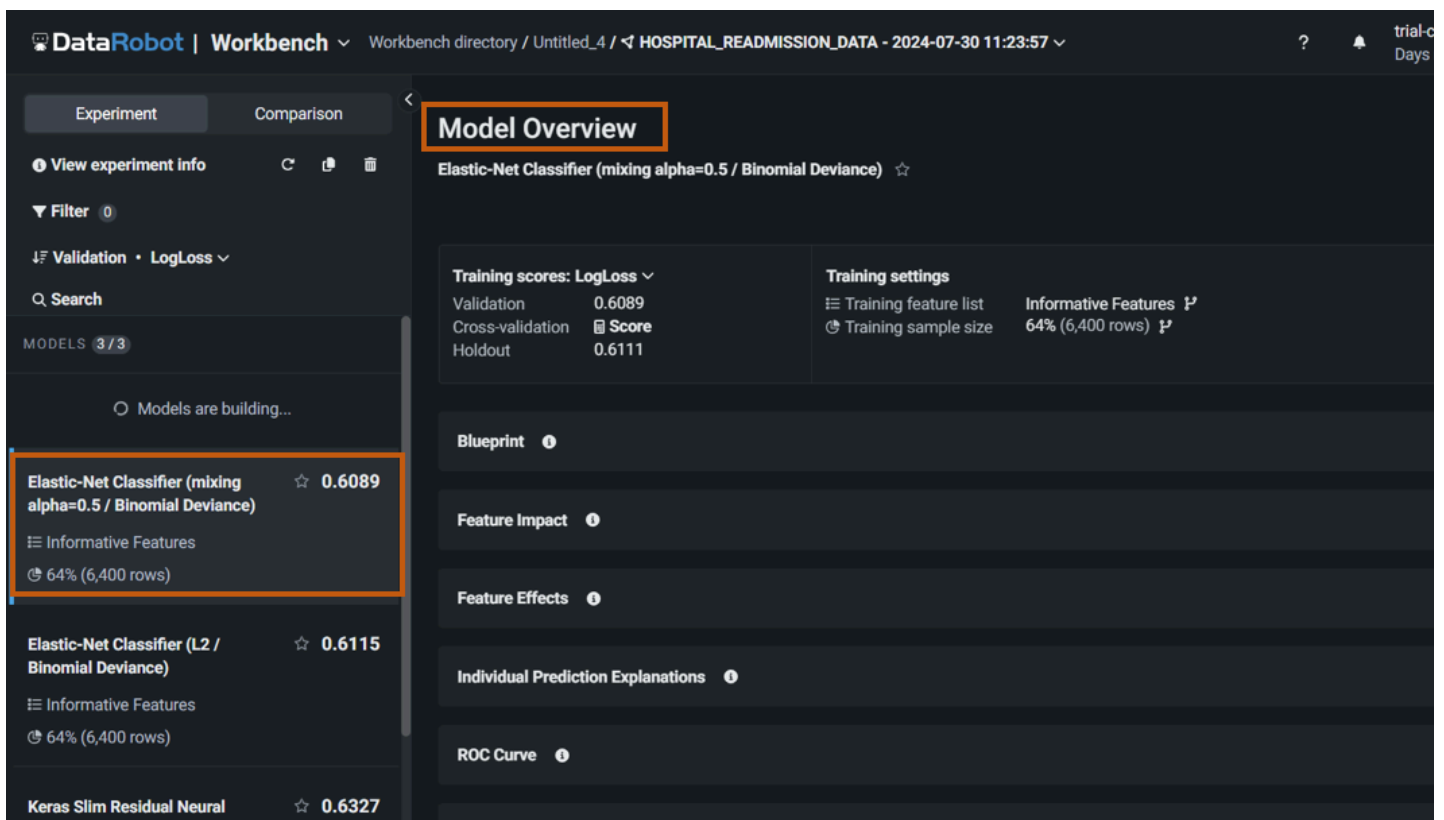
Target
Feature
Target type
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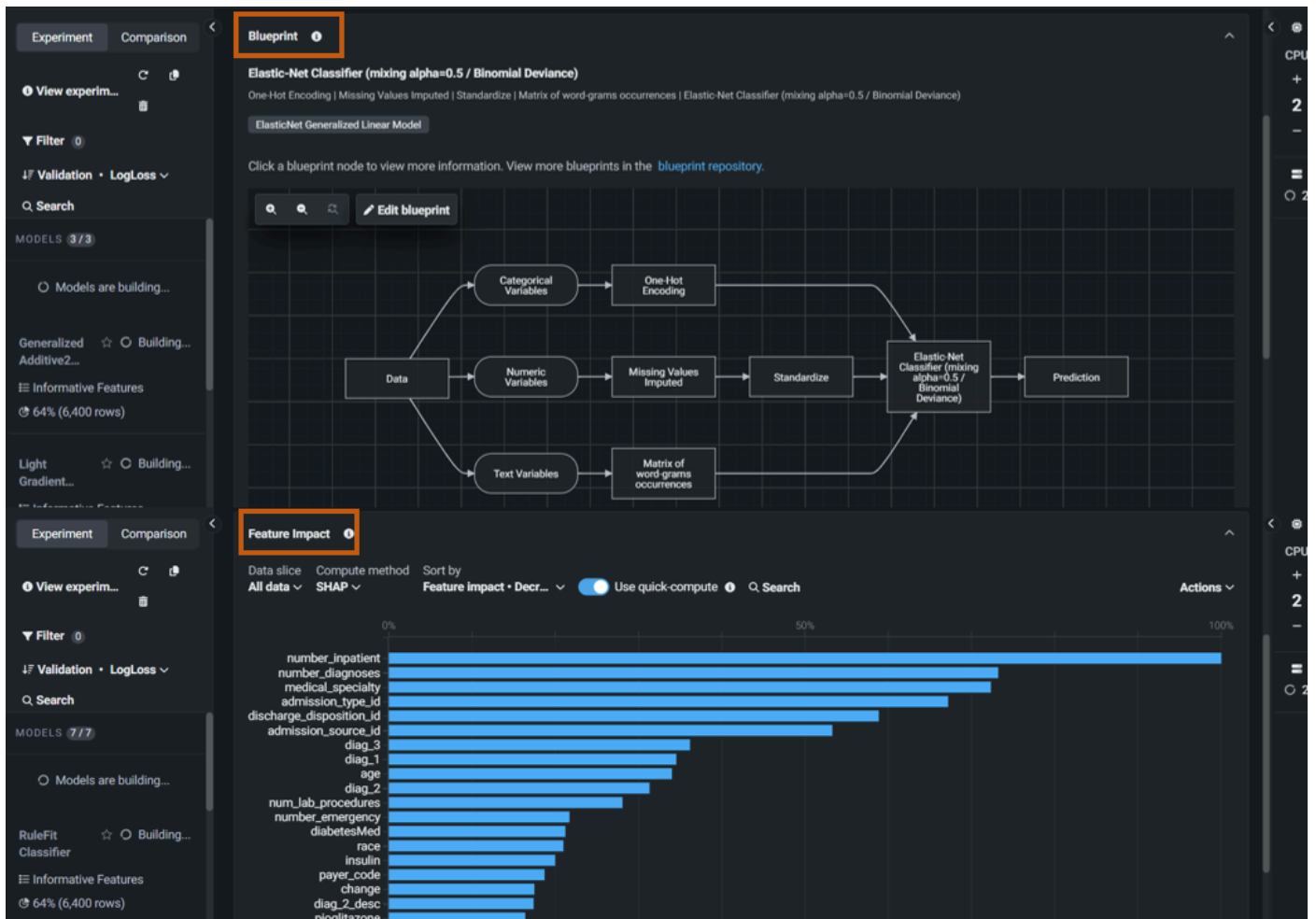
Step 18: Building models will take a while.



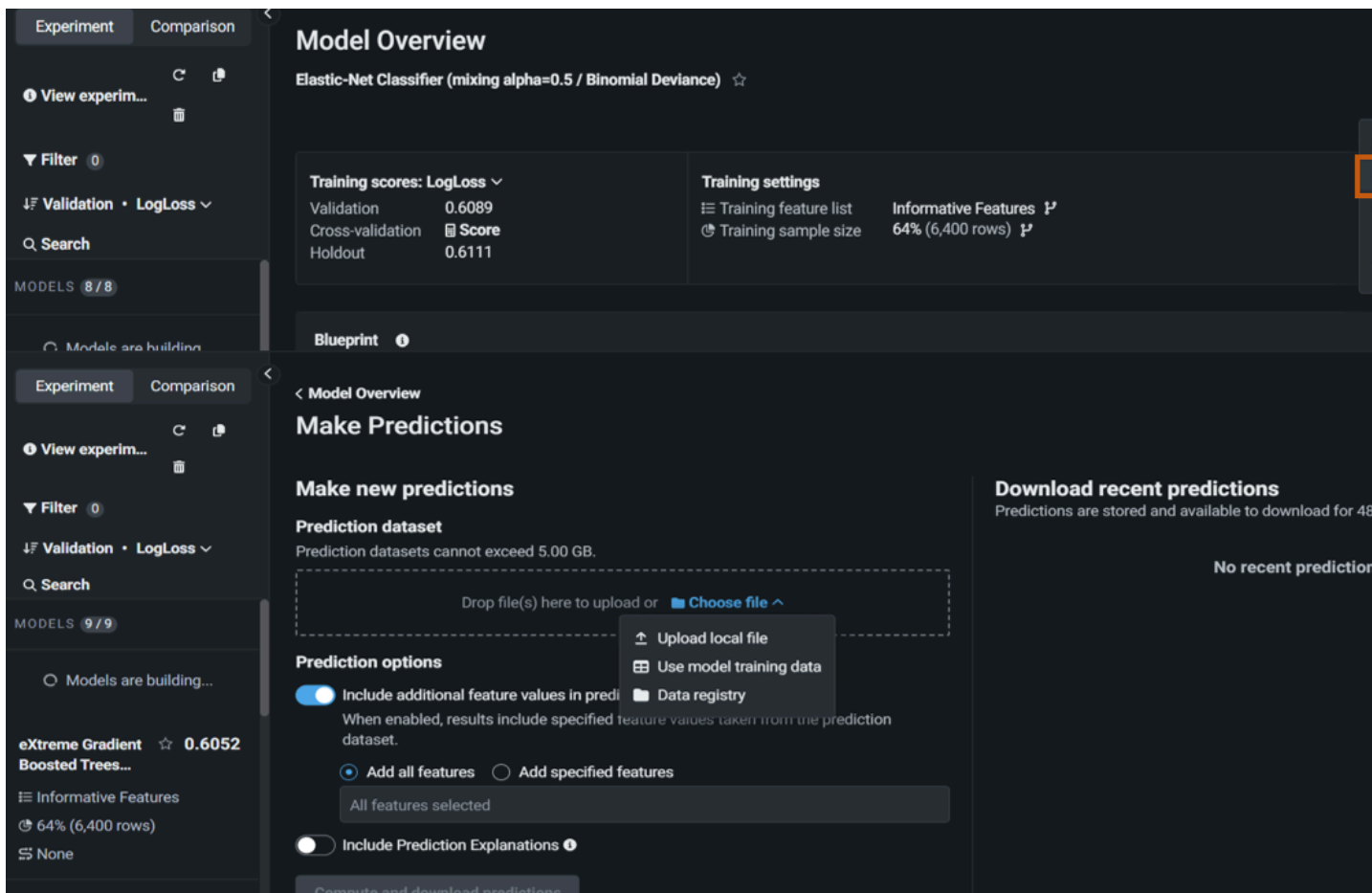
Step 19: once the modelling is complete, you can pick a model of your choice, and the DataRobot will show the **Model Overview**.



Step 20: You can explore various model overview components like **Blueprint**, **Feature Impact**, and so on.



Step 21: If you have test or unseen data, you can also make predictions by clicking **Make Predictions** under **Model actions**.



Step 22: You can also click **Generate compliance report** and **download compliance report** for your use case.

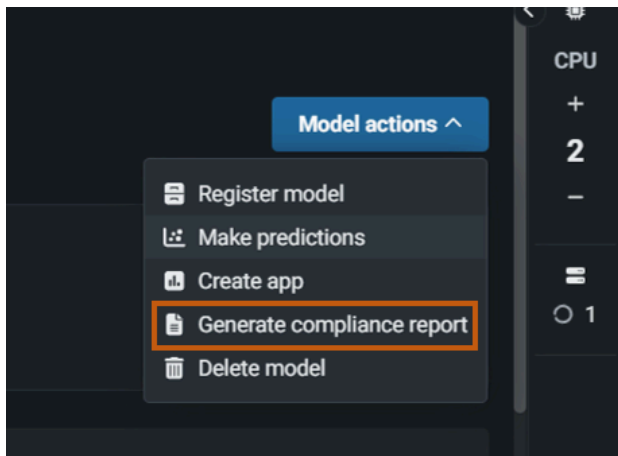


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Conclusion

In this lab, you have signed up in DataRobot, added a data set in a use case, and worked on data modelling.

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