

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

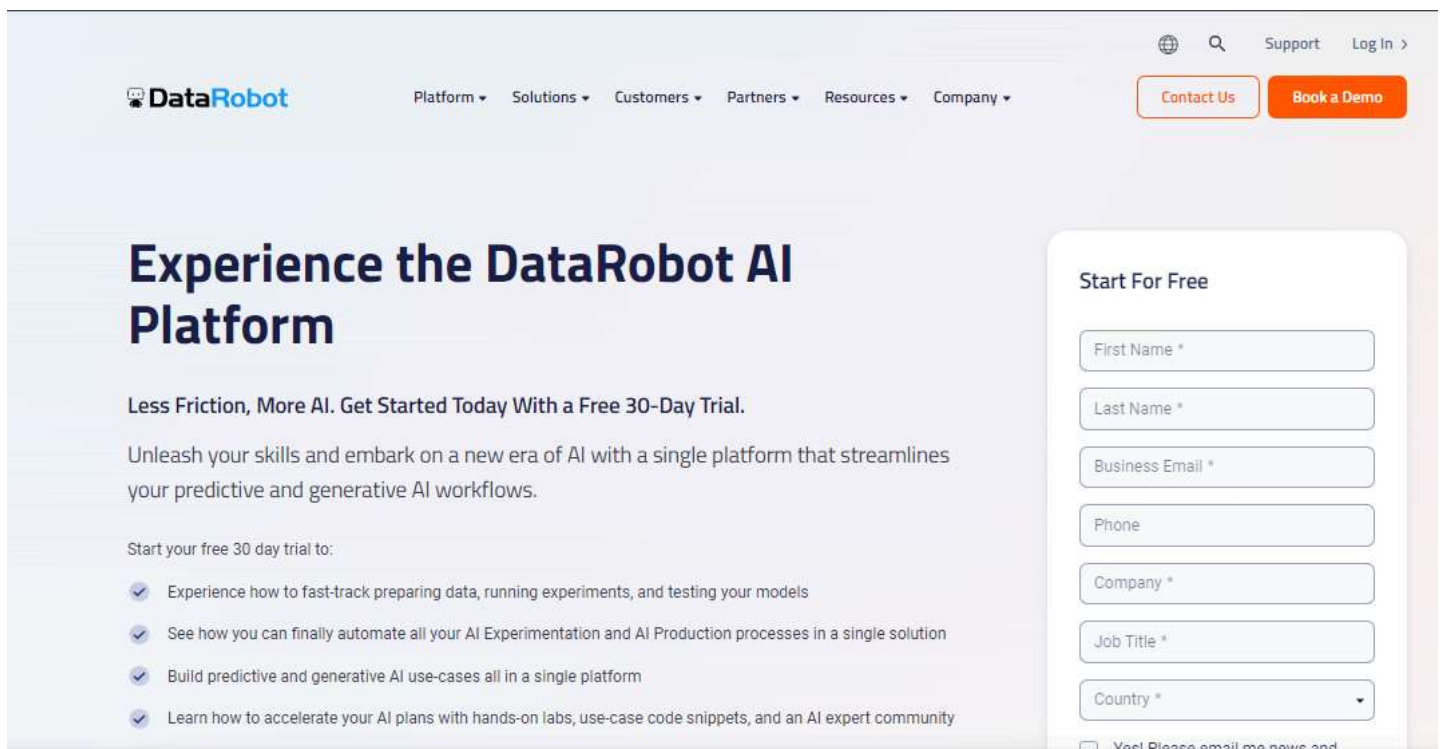
After completing this lab, you will be able to:

- Signup 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.




The screenshot shows the DataRobot website's homepage. The header includes the DataRobot logo, navigation links (Platform, Solutions, Customers, Partners, Resources, Company), and a top right section with a globe icon, a search icon, 'Support', and 'Log In >'. Below the navigation are two buttons: 'Contact Us' and 'Book a Demo'. The main content area features the heading 'Experience the DataRobot AI Platform' and the subheading 'Less Friction, More AI. Get Started Today With a Free 30-Day Trial.' Below this is a paragraph: 'Unleash your skills and embark on a new era of AI with a single platform that streamlines your predictive and generative AI workflows.' A section titled 'Start your free 30 day trial to:' lists four bullet points with checkmarks: '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', and 'Learn how to accelerate your AI plans with hands-on labs, use-case code snippets, and an AI expert community'. On the right side, there is a 'Start For Free' form with input fields for 'First Name *', 'Last Name *', 'Business Email *', 'Phone', 'Company *', 'Job Title *', and 'Country *'. At the bottom of the form is a checkbox labeled '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

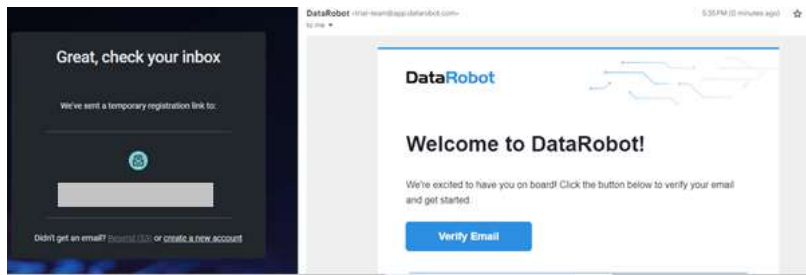
.....



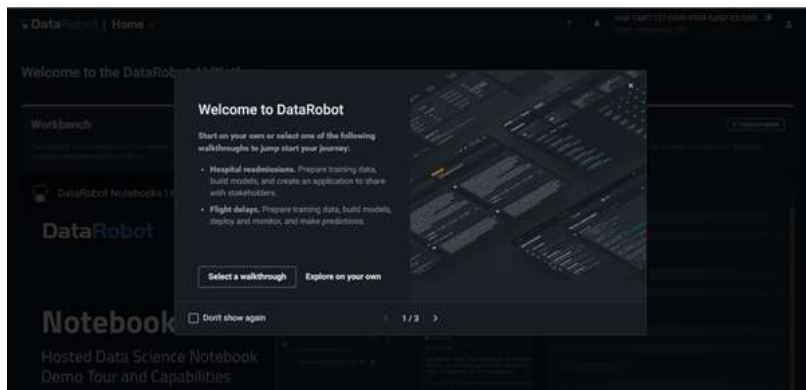
Reset password

Sign in

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

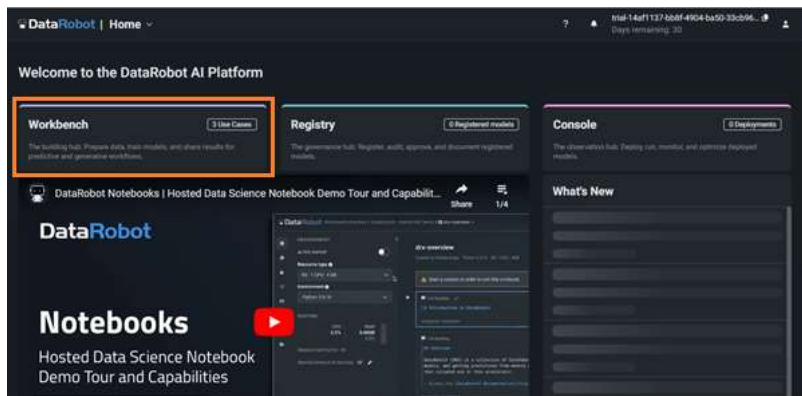


Step 6: Sign up and start your first experience of using the Generative AI tool.
The dashboard will look like the image below. You may like to familiarize yourself with the application by clicking **Select a walkthrough**.

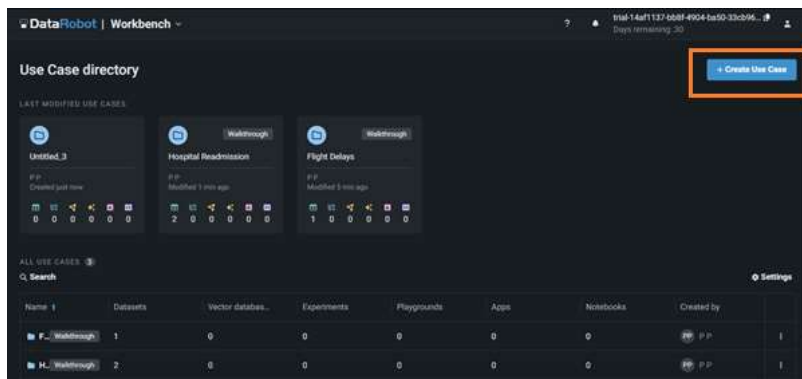


Task 2: Add a data set

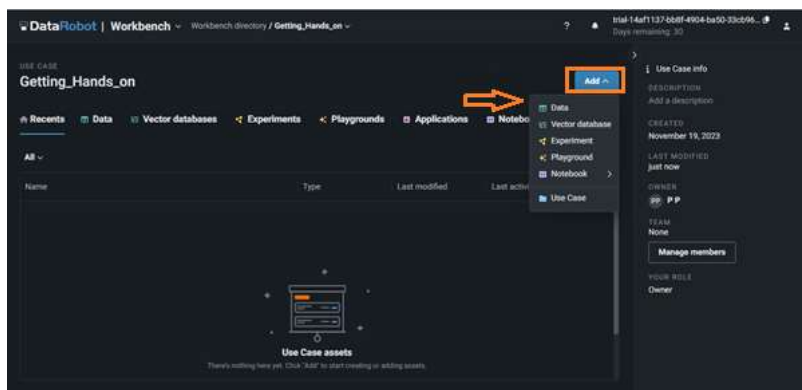
Step 7: The dashboard will appear shortly, and your screen will look as shown below. Click **Workbench**.



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*.

DataRobot | Workbench

Workbench directory / Untitled_4

trial-c33

Days re

Add data

DATA STORES

↑ Upload

+ Connect

Q Search

Data Registry

DataRobot

Demo Connection

Snowflake

Data Registry

Q Search

<input type="checkbox"/>	Name	Created on ↑	Type	Last modified
<input type="checkbox"/>	<div><div></div>HOSPITAL_READMISSION_DATA</div>	1d ago	Snapshot	1d ago

< Previous

1

Next >

1 per page

1-1 of 1 items

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**.

DataRobot | Workbench

Workbench directory / Untitled_4

trial-c33

Days re

Add data

DATA STORES

↑ Upload

+ Connect

Q Search

Data Registry

DataRobot

Demo Connection

Snowflake

HOSPITAL_READMISSION_DATA

Data Registry / HOSPITAL_READMISSION_...

Features

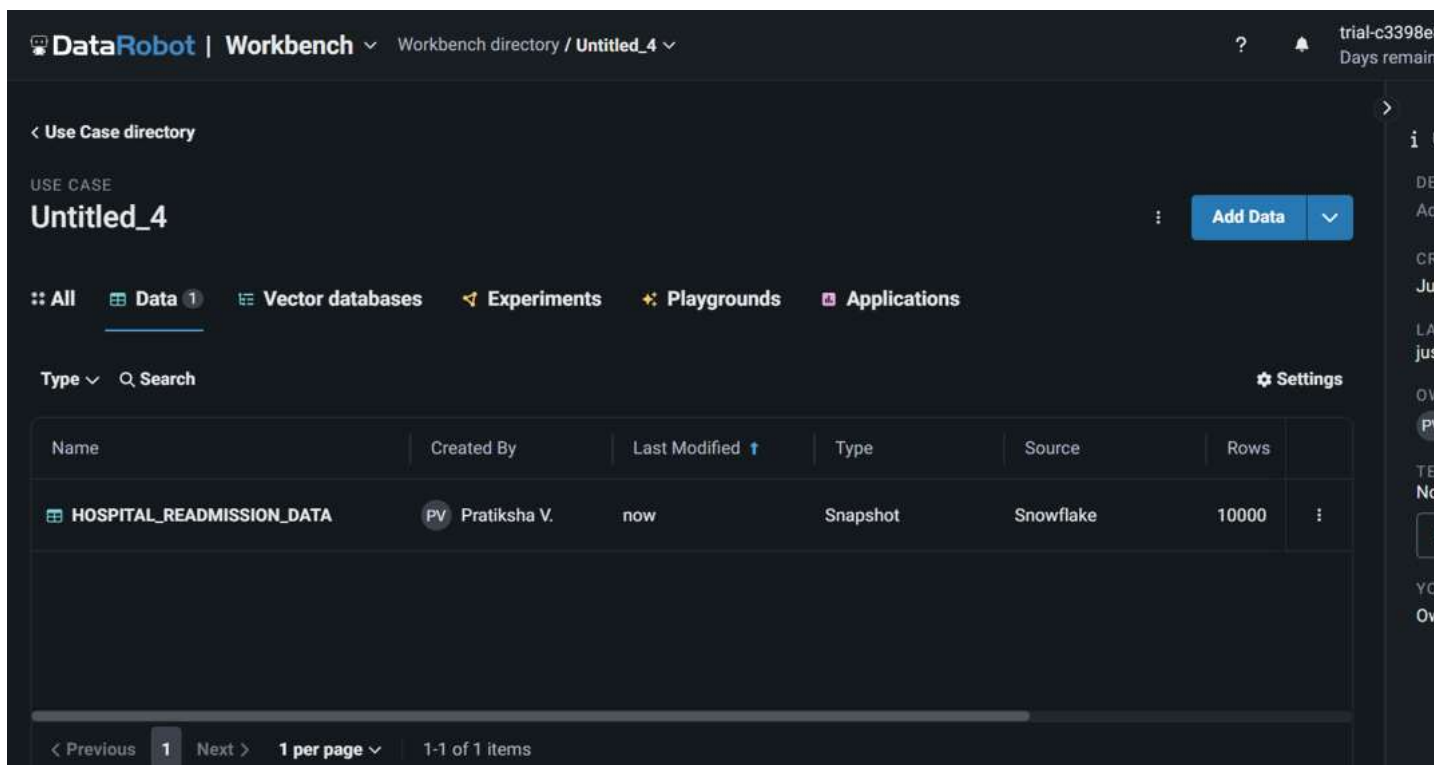
Data preview

race	gender	age	weight	admission
Categorical	Categorical	Categorical	Categorical	Categorical
Caucasian	Male	[50-60)		Emergency
Caucasian	Female	[70-80)		Urgent
Caucasian	Male	[60-70)		Elective
Caucasian	Male	[60-70)		
Caucasian	Female	[40-50)		Not Availa
Caucasian	Male	[90-100)		Emergency
Caucasian	Male	[70-80)		Urgent
Caucasian	Female	[80-90)		Urgent
Hispanic	Female	[50-60)		Emergency

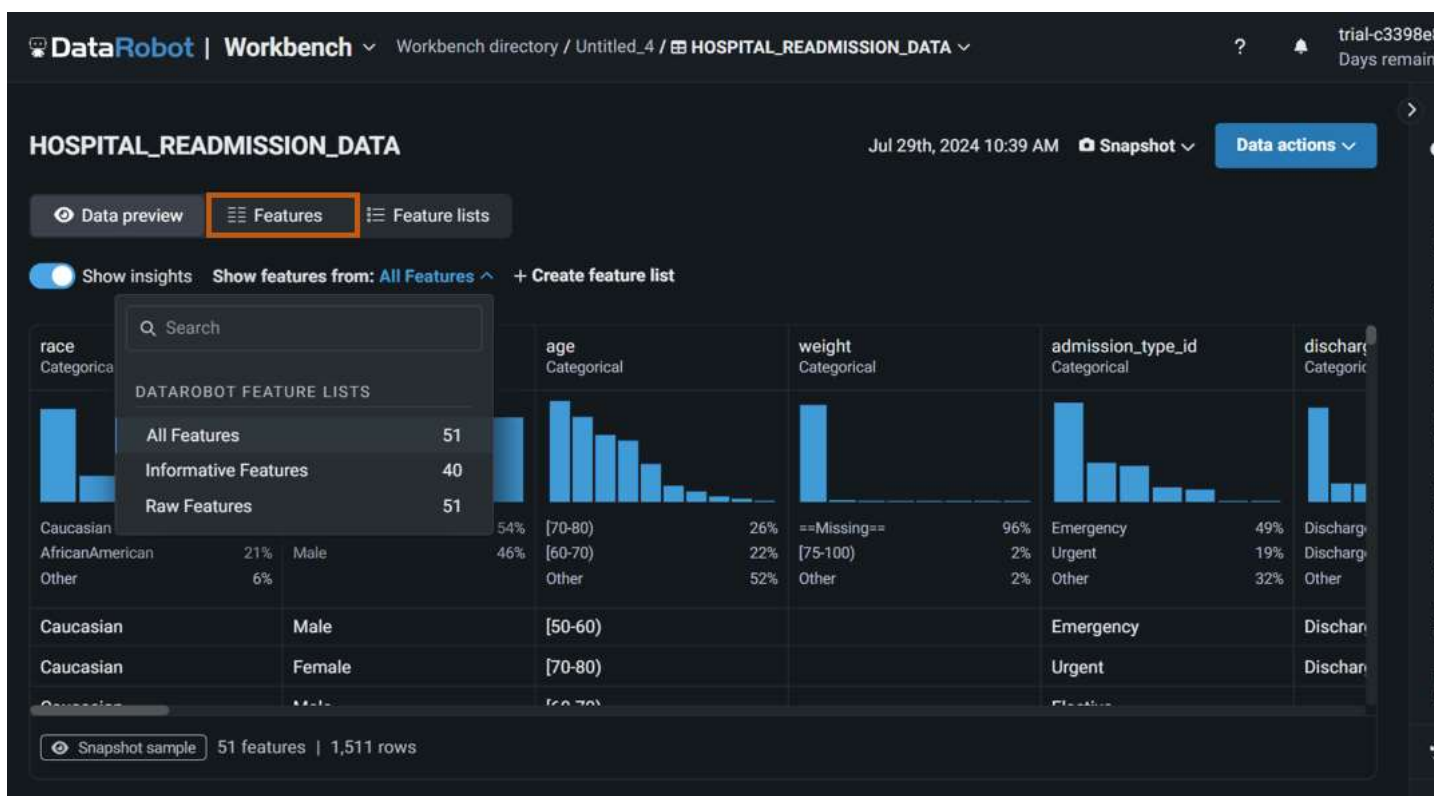
Snapshot sample

51 features | 1,511 rows

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.



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



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

Set up new experiment

Dataset Target Additional settings

Target feature
Select the feature to make predictions on.

readmitted

Target type: Binary classification

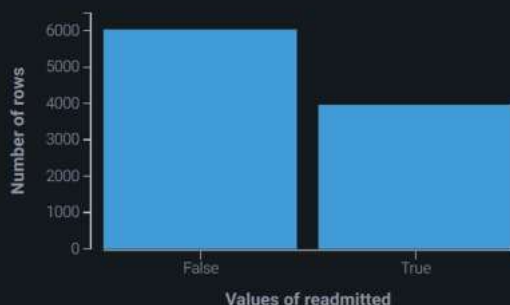
Positive class: ☐ 0 ☒ 1

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_P
07-30 11:23

Dataset
Name

Rows
Features

Target
Feature
Target type
Positive class
Modeling mo
Optimization
Training feat

Partitioning

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_P
07-30 11:23

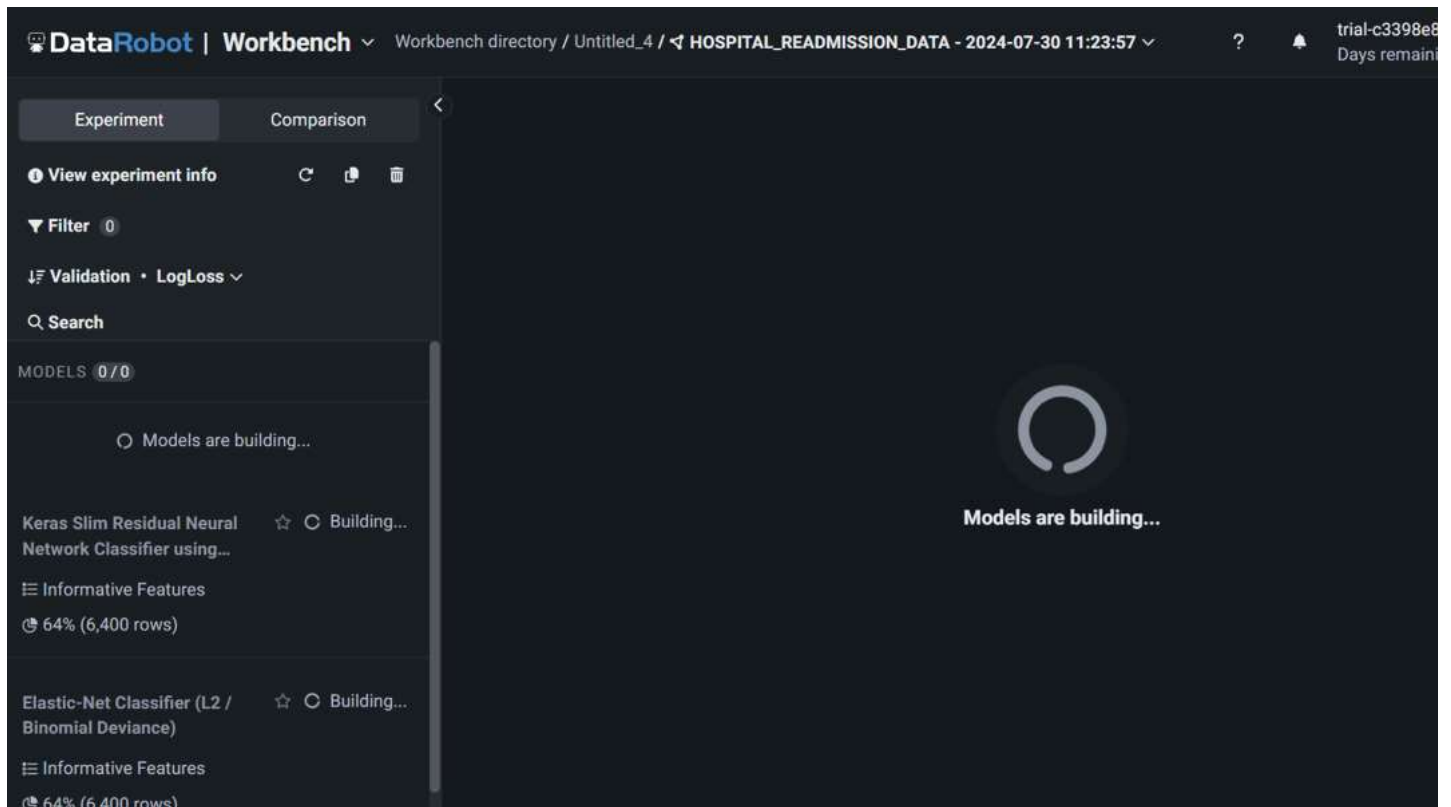
Dataset
Name

Rows
Features

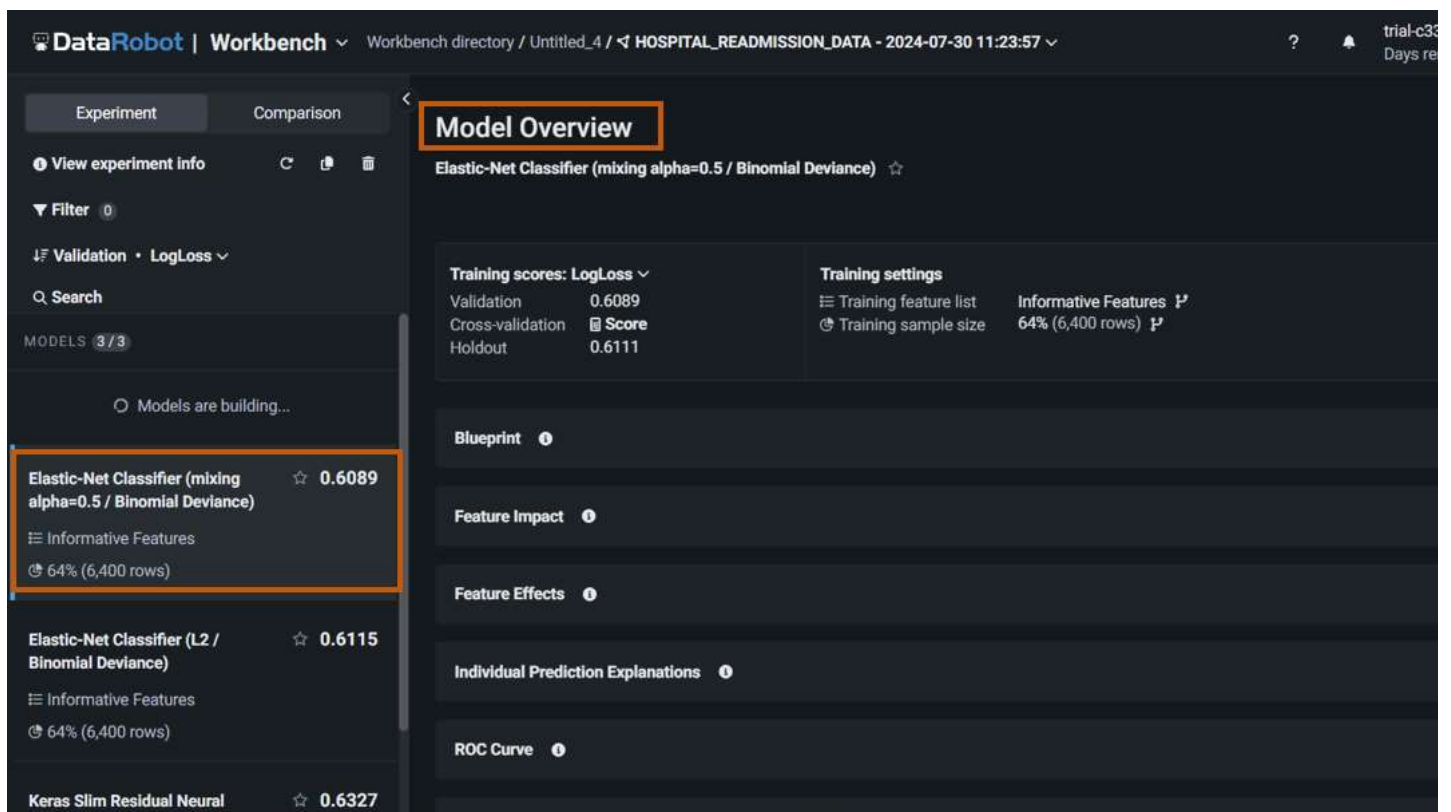
Target
Feature
Target type
Positive class
Modeling mo
Optimization
Training feat

Partitioning

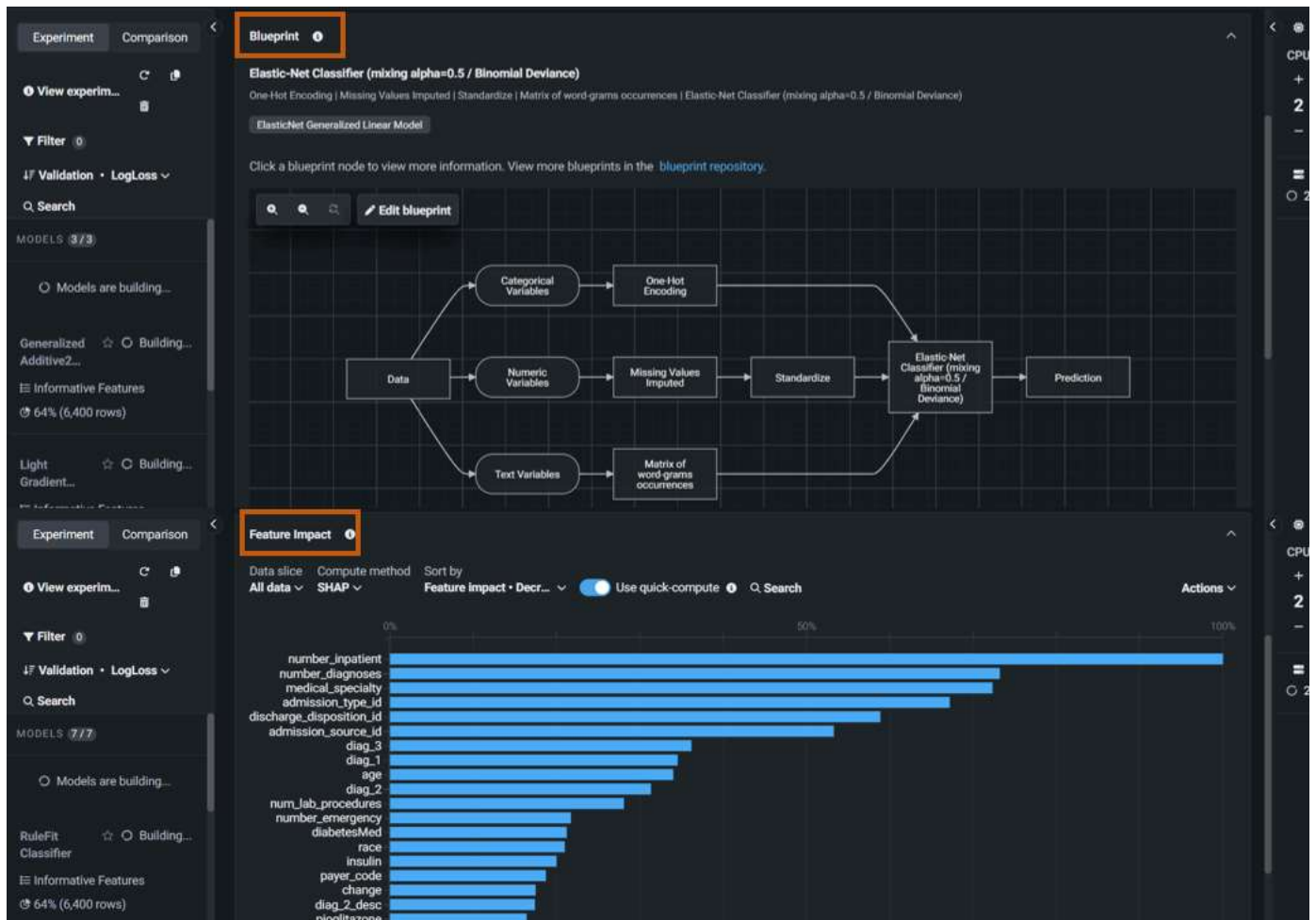
Step 18: Building models will take a while.



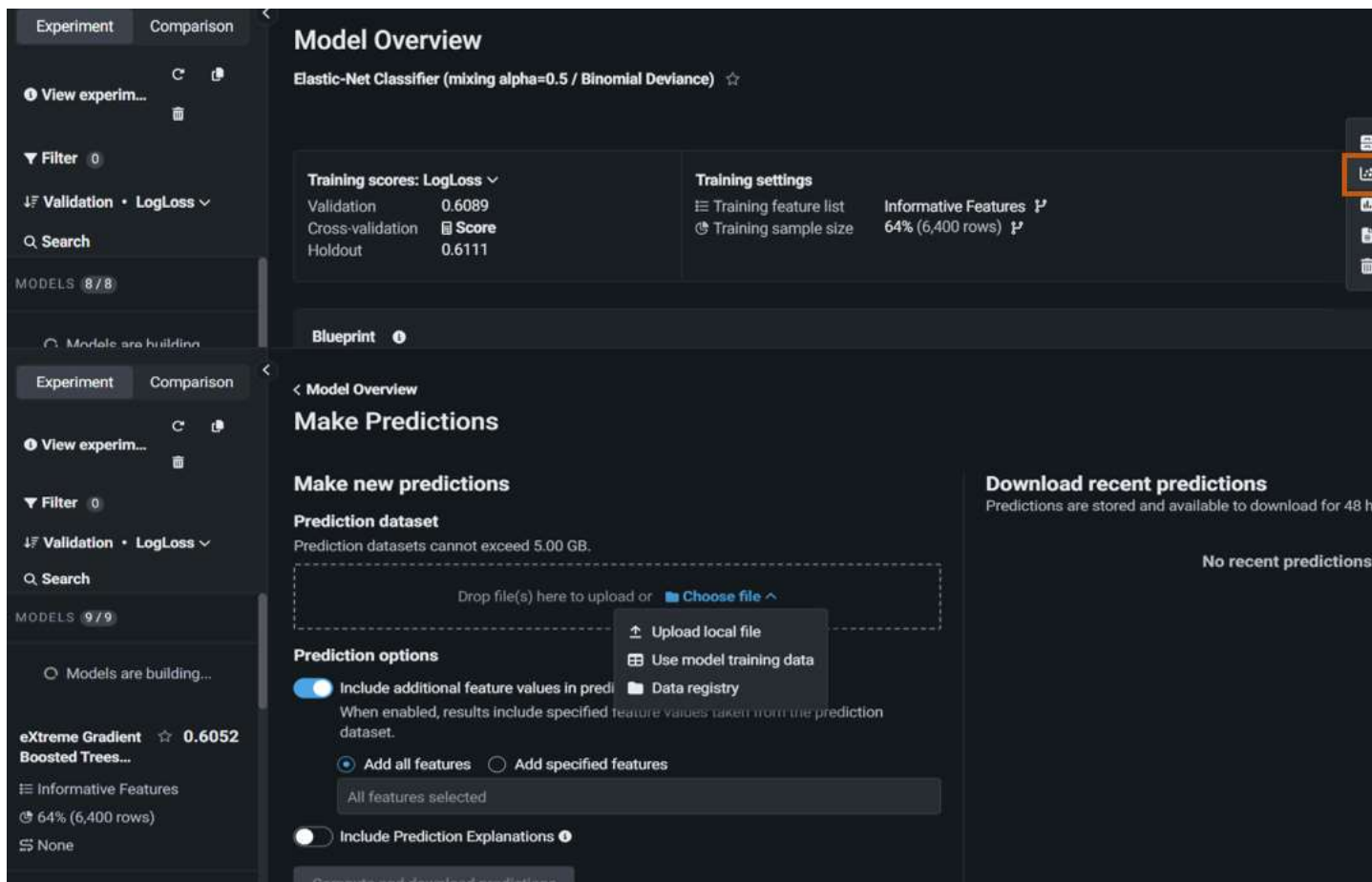
Step 19: once the modelling is complete, you can pick a model of your choice, and the DataRobot will show the **Model Overview**.



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.

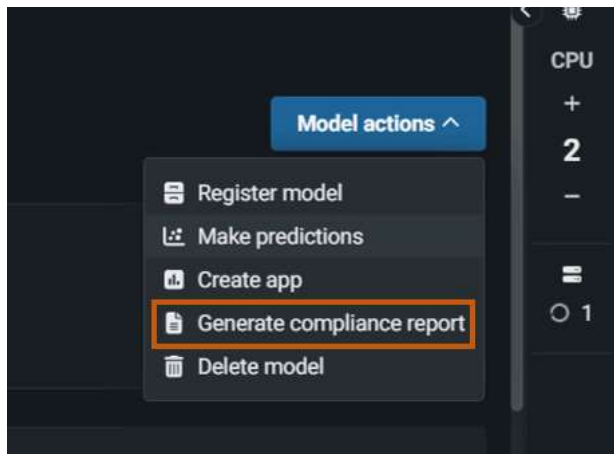


Table of Contents

- 1 How To Use This Document
- 2 DataRobot Model Development Documentation
- 3 Executive Summary and Model Overview
 - 3.1 Model Stakeholders
 - 3.2 Model Development Purpose and Intended Use
 - 3.3 Model Description and Overview
 - 3.4 Overview of Model Results
 - 3.5 Model Interdependencies
- 4 Model Data Overview
 - 4.1 Feature Association
 - 4.2 Data Source Overview and Appropriateness
 - 4.3 Input Data Extraction, Preparation, and Quality & Completeness

Conclusion

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

Author(s)

[Dr. Pooja](#)

© IBM Corporation. All rights reserved.



Skills Network