

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

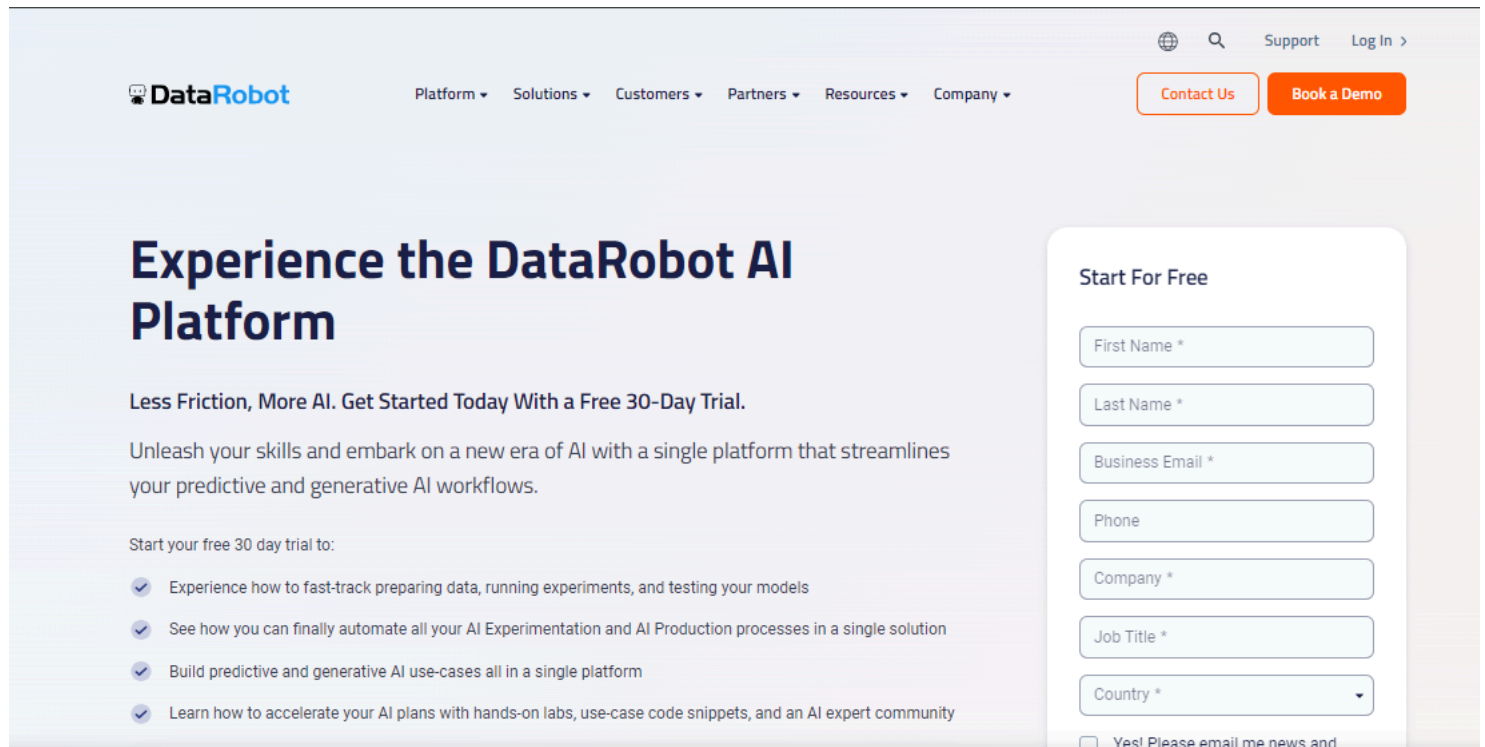
After completing this lab, you will be able to:

- 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.



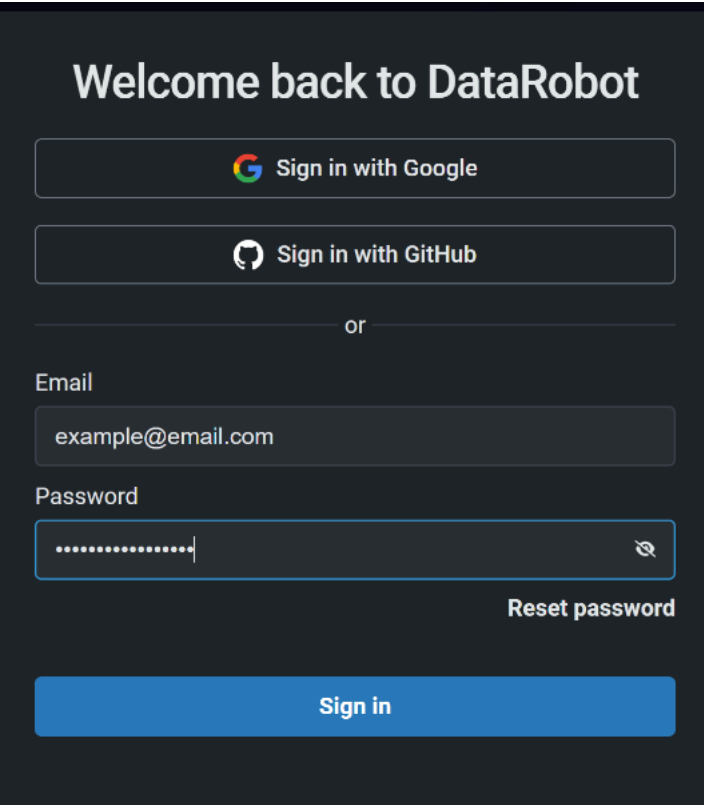
The screenshot shows the DataRobot website's homepage. The header includes the DataRobot logo, navigation links (Platform, Solutions, Customers, Partners, Resources, Company), and links for Support, Log In, Contact Us, and Book a Demo. The main content area features the headline "Experience the DataRobot AI Platform" and a sub-headline "Less Friction, More AI. Get Started Today With a Free 30-Day Trial." Below this, a paragraph states: "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 benefits with checkmarks. On the right, a "Start For Free" form is visible, containing input fields for First Name, Last Name, Business Email, Phone, Company, Job Title, and Country, followed by a checkbox for "Yes! Please email me news and..."

Note: To access the DataRobot platform, you must sign up using a work email address. If you do not have a relevant work email, an alternative is to create a GitHub account using your Gmail address. Once registered, you can log in to DataRobot using your GitHub credentials.

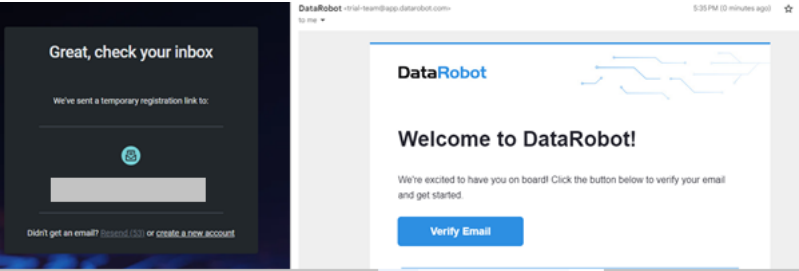
For step-by-step guidance on creating a GitHub account, please refer to the following link:

[GitHub Account Setup Guide](#)

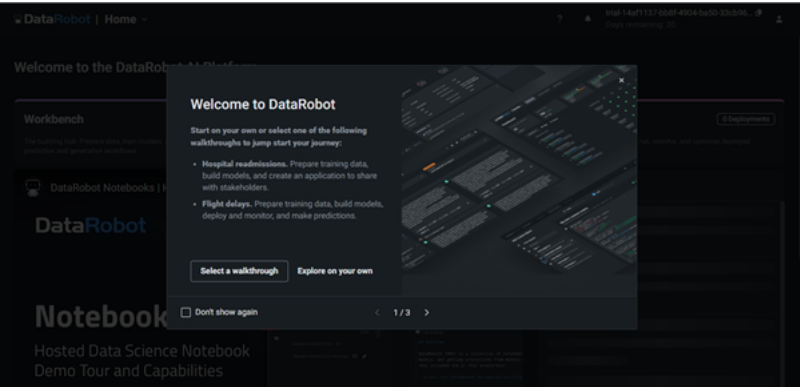
Step 4: A new window will open; select the relevant option for signing up.



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

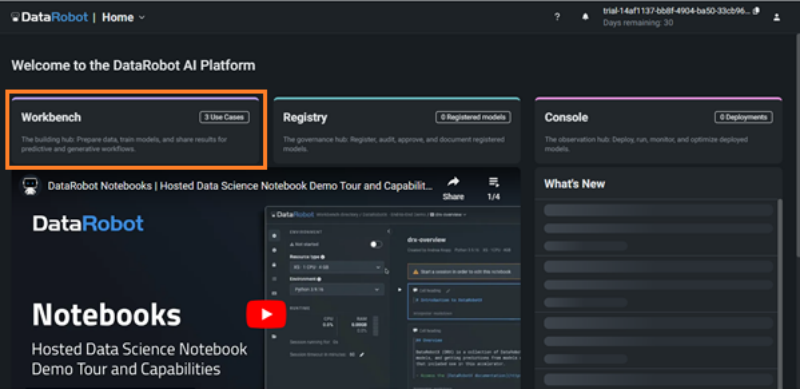


Step 6: Sign up and start your first experience of using the Generative AI tool.
The dashboard will look like the image below. You may like to familiarize yourself with the application by clicking **Select a walkthrough**.

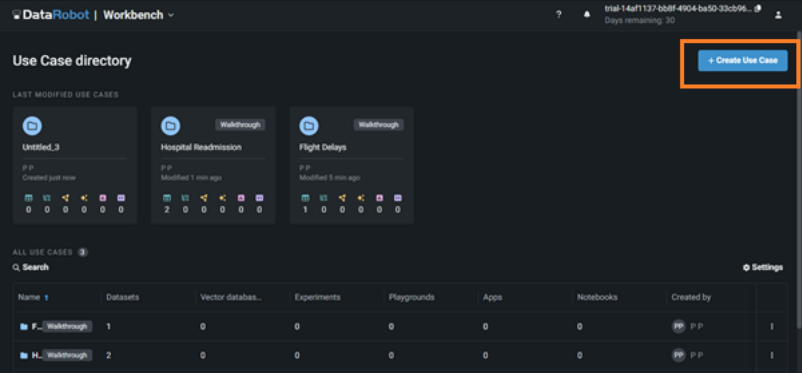


Task 2: Add a data set

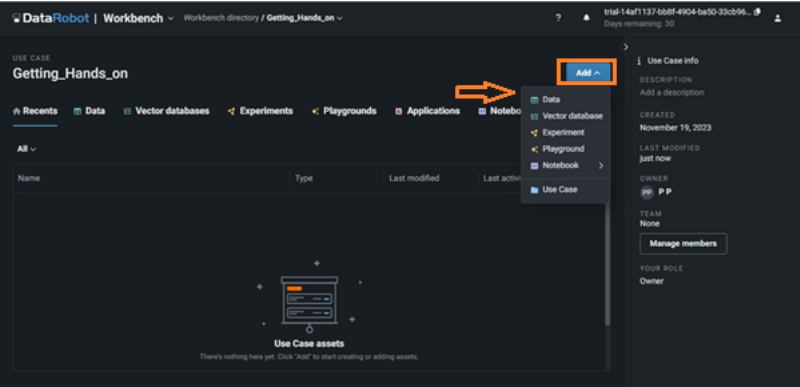
Step 7: The dashboard will appear shortly, and your screen will look as shown below. Click **Workbench**.



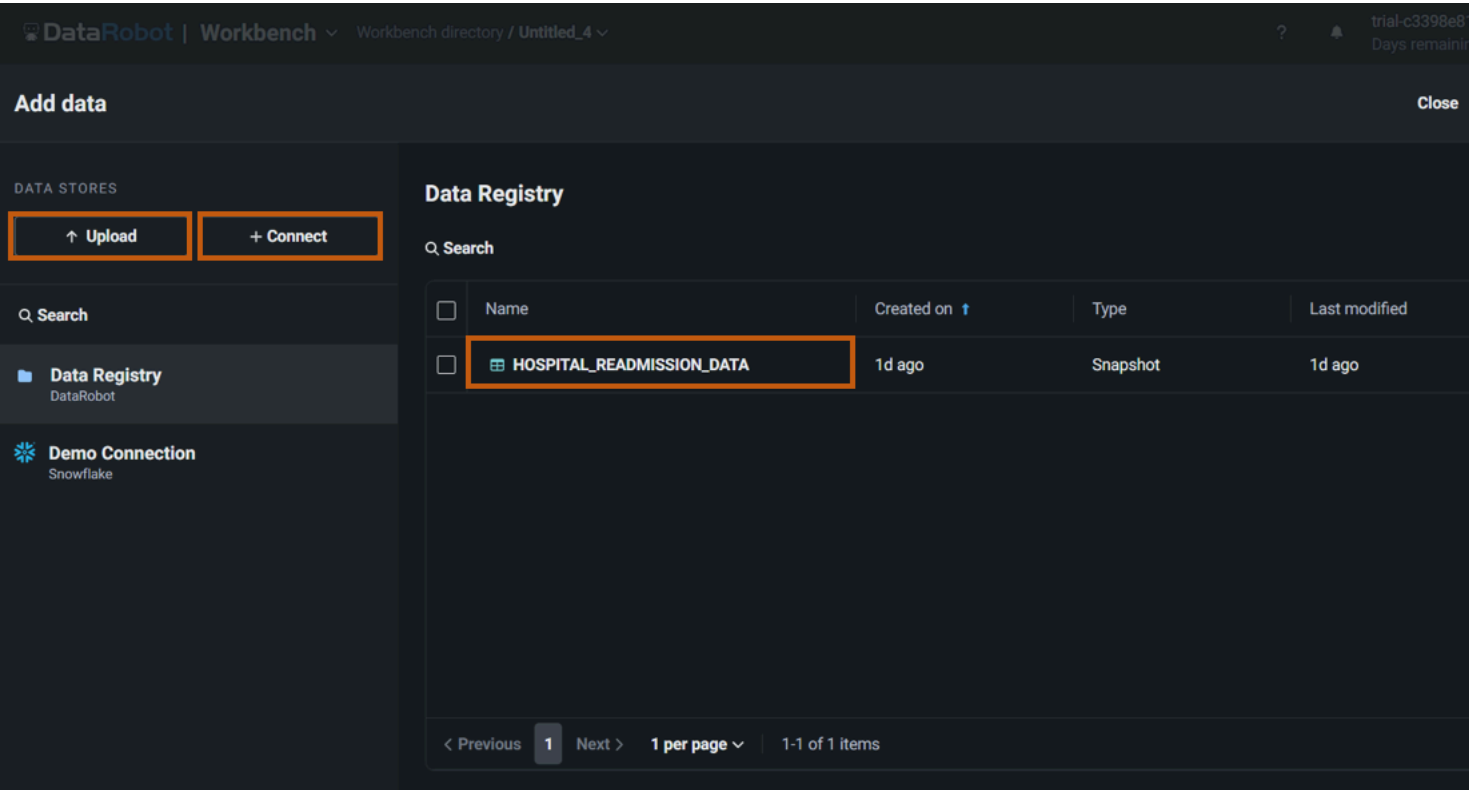
Step 8: Click **Create Use Case**.



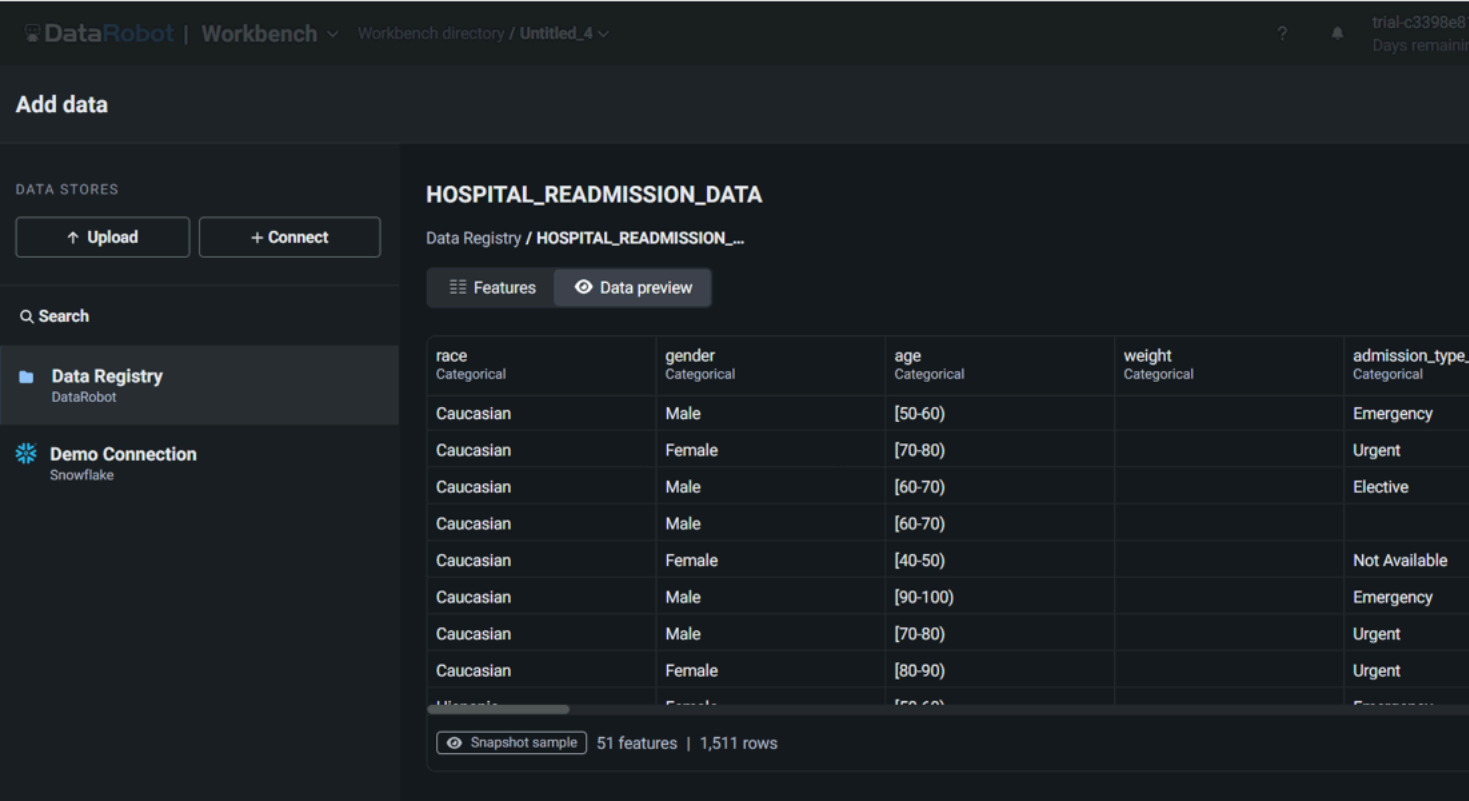
Step 9: Click **Add** and **Data** to include the data set in your use case.



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.

Use Case
DESCRIPTION
Add a de
CREATE
July 29,
LAST M
just now
OWNER
PV Pra
TEAM
None
Mana
YOUR RO
Owner

DataRobot | Workbench

Workbench directory / Untitled_4 / HOSPITAL_READMISSION_DATA

?
🔔
trial-c3398e81-5e81-4000-9000-000000000000
Days remaining: 28

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

Categorical

Bar chart showing distribution of race categories

age

Categorical

Bar chart showing distribution of age categories

weight

Categorical

Bar chart showing distribution of weight categories

admission_type_id

Categorical

Bar chart showing distribution of admission type categories

discharge_id

Categorical

Bar chart showing distribution of discharge type categories

race	age	weight	admission_type_id	discharge_id
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
Caucasian	[60-70]		Emergency	Discharge

📷 Snapshot sample
51 features | 1,511 rows

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.

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

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

trial-c3398e81-5e3

Days remaining: 2

?

🔔

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

Number of rows

6000

5000

4000

3000

2000

1000

0

False

True

Values of readmitted

Experiment summary

HOSPITAL_READMITTED

07-30 11:23:57

Dataset

Name

Rows

Features

Target

Feature

Target type

Positive class

Modeling mode

Optimization metric

Training feature list

Partitioning

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

trial-c3398e81-5e3

Days remaining: 2

?

🔔

DataRobot | Workbench

Workbench directory / Untitled_4

Set up new experiment

✓ Dataset

✓ Target

⚙️ Additional settings

Exit

📊 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 summary

HOSPITAL_READMITTED

07-30 11:23:57

Dataset

Name

Rows

Features

Target

Feature

Target type

Positive class

Modeling mode

Optimization metric

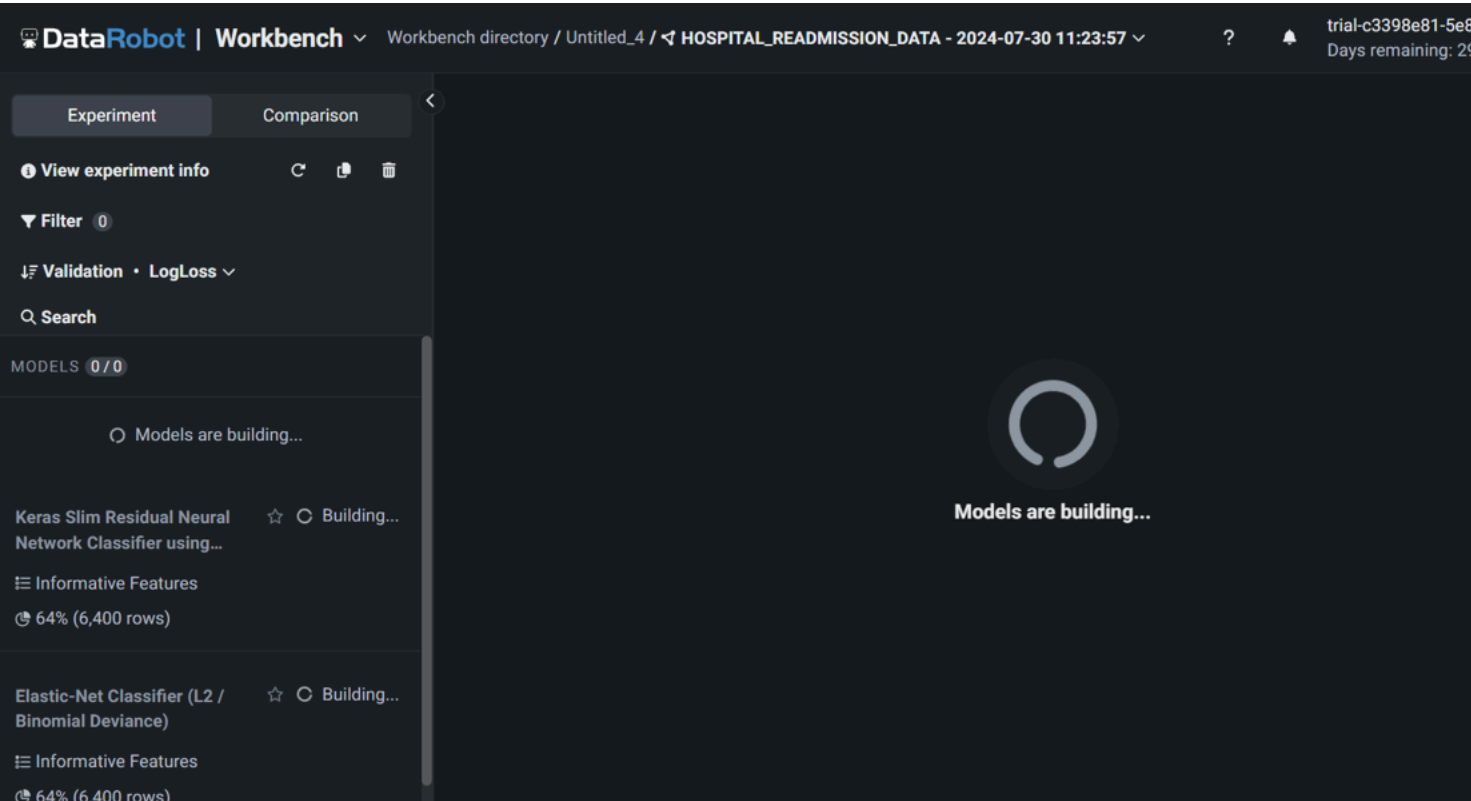
Training feature list

Partitioning

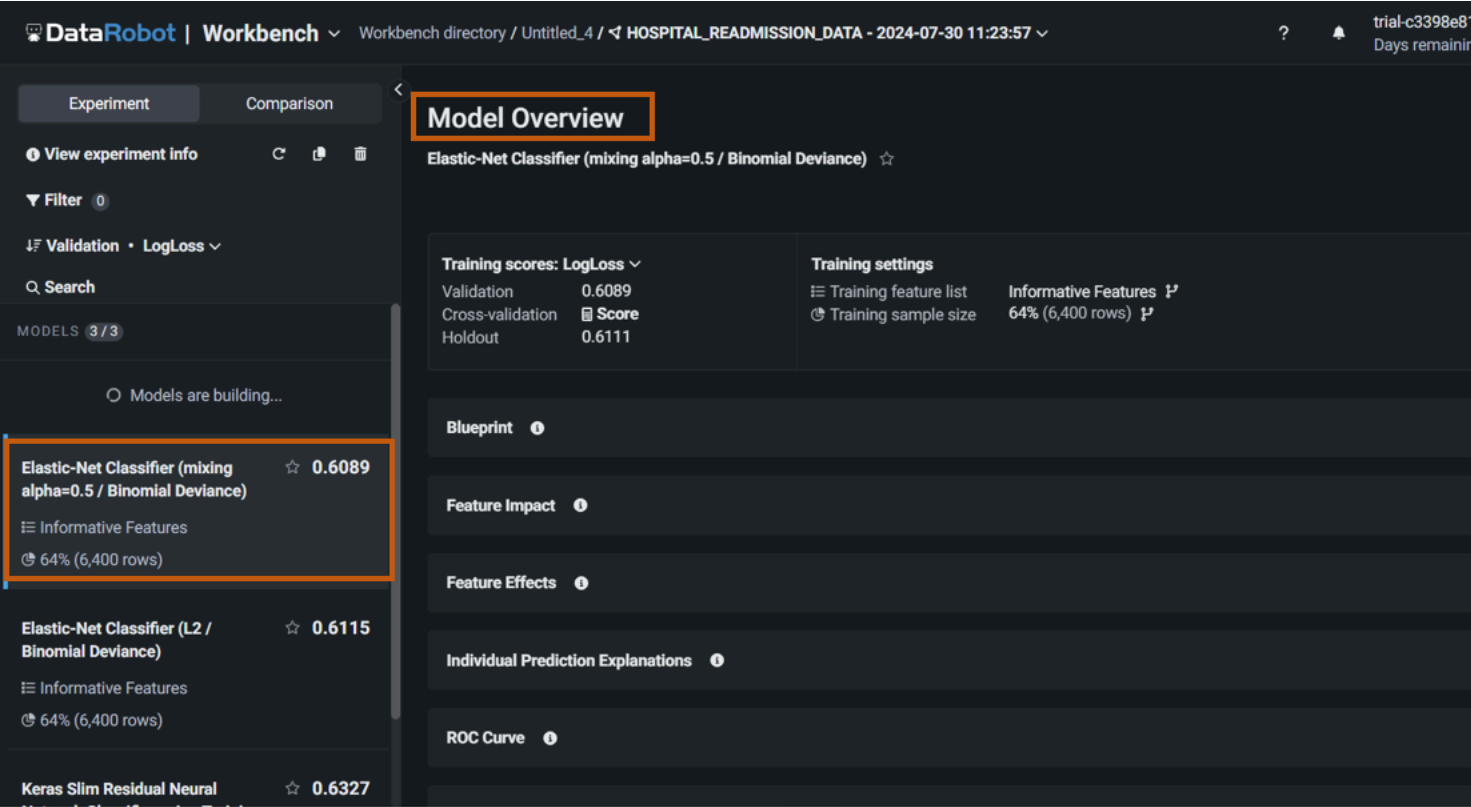
Step 18: Building models will take a while.

about:blank

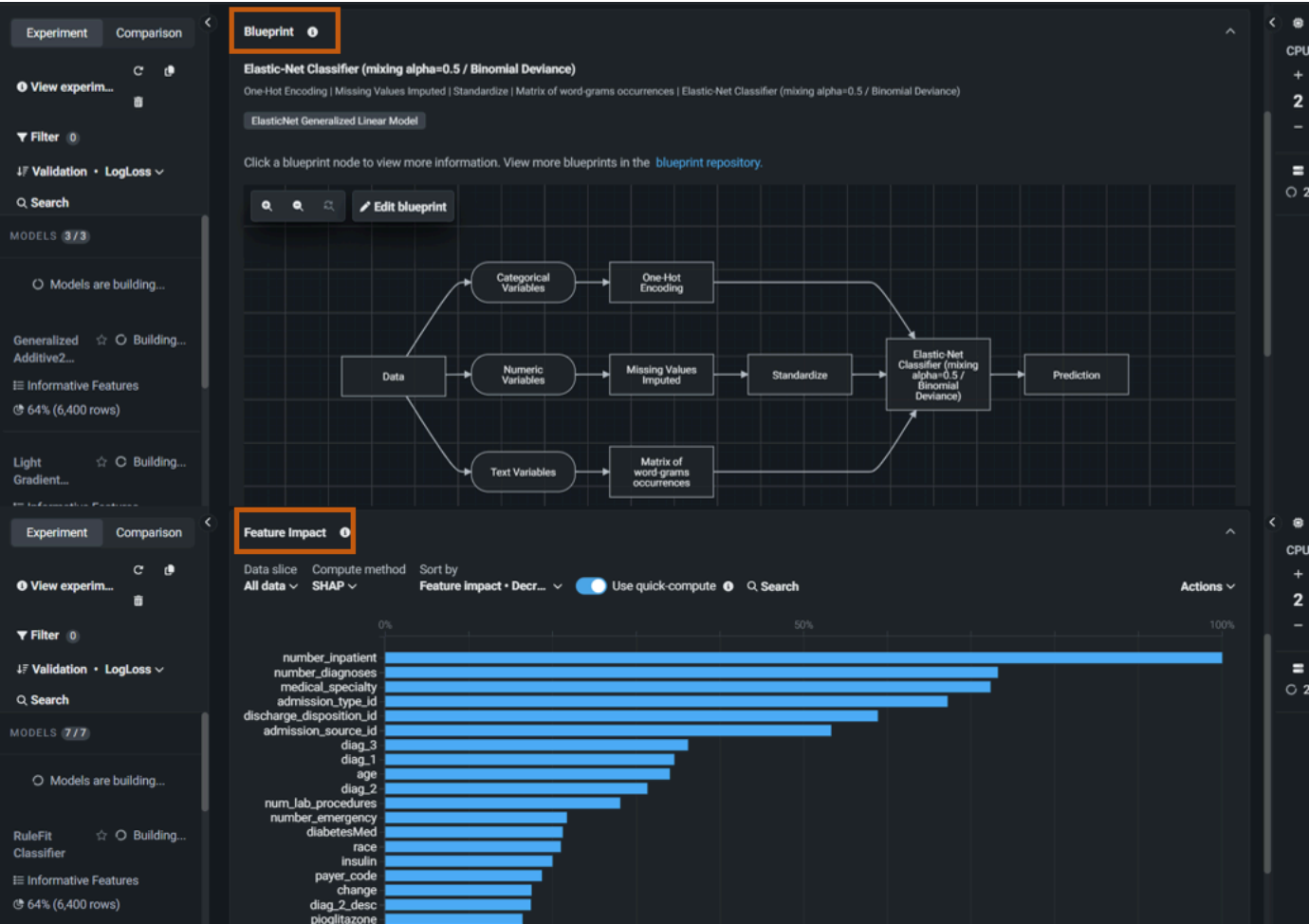
7/10



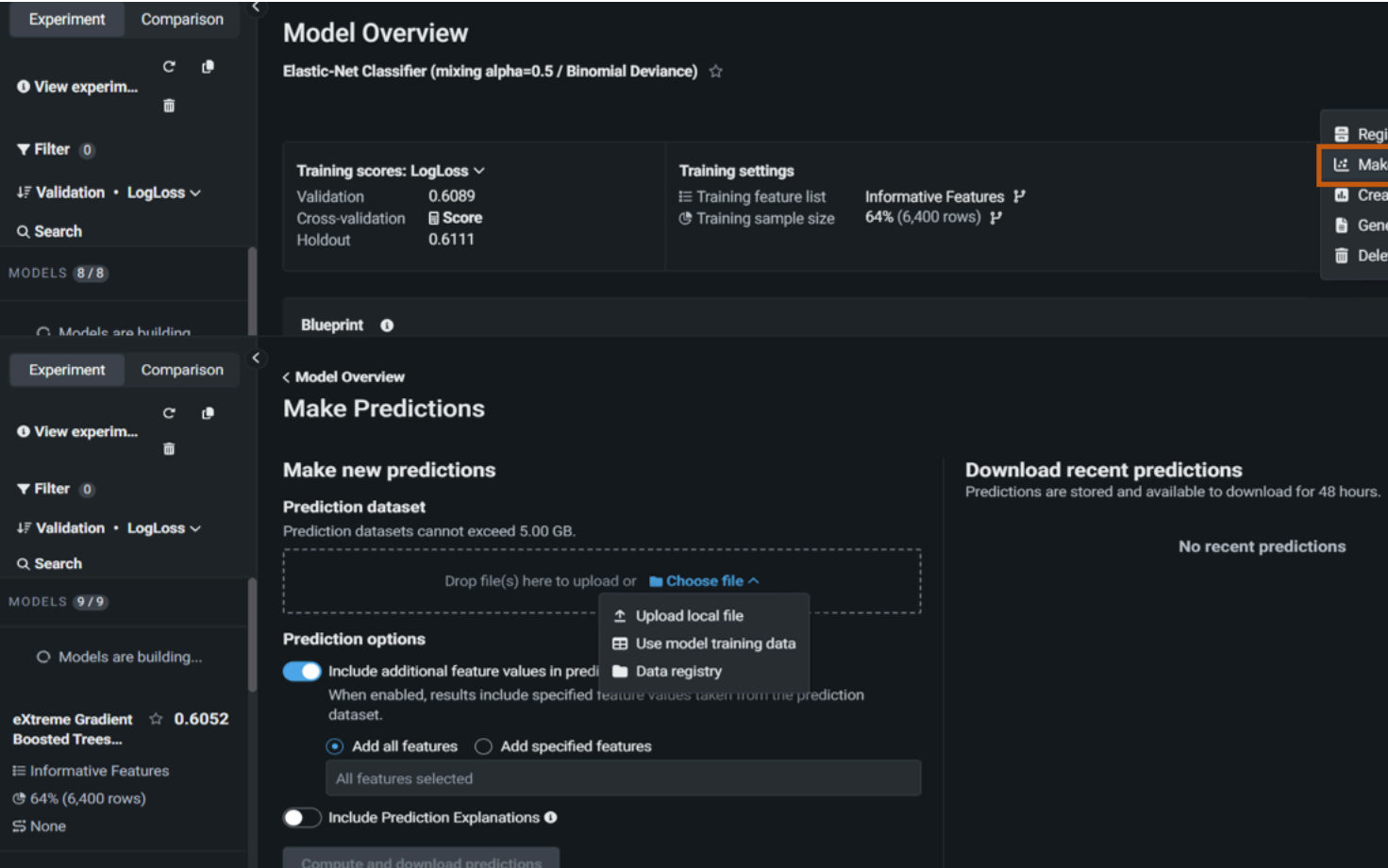
Step 19: once the modelling is complete, you can pick a model of your choice, and the DataRobot will show the **Model Overview**.



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.

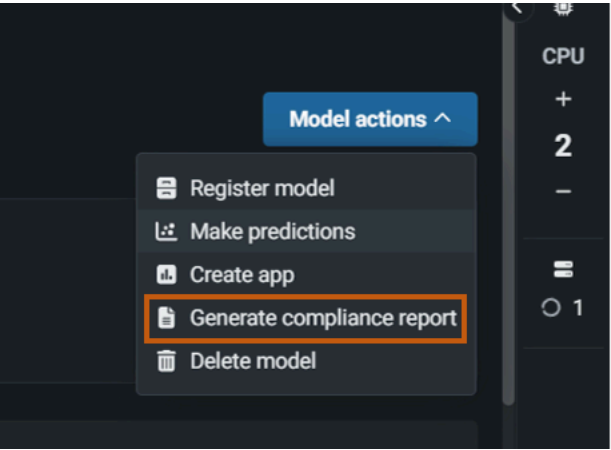


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Conclusion

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

Author(s)

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Skills Network