DATABRICKS_CODEBASICS PROJECT CHALLENGE

By

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Ongoing | AI and Data Science Courses

Build With Databricks: Hands-On Project Challenge

Deadline
Feb 01, 2026 I 11:59 PM IST

Prize Pool
₹ 2,00,000

Overview

In this project challenge, the focus is on building a real-world solution using Databricks. The project is self-directed: you will define the problem, select the dataset, and architect an end-to-end solution on the Databricks Lakehouse to showcase your learning in a portfolio-ready project.

Enroll for Free

₹ 2,00,000 Prize Pool

633 Participants

Difficulty: Intermediate

INTRODUCTION

- Patients with chronic disease often fails to follow up.
- They endup in advanced disease condition without proper care.
- It will be useful if we find the model that predicts these patients, So we will have rigorous follow up.

DATASET

NUDRAT ABBAS · UPDATED 11 DAYS AGO

30 | Code | Download

Patient Churn Prediction Dataset for Healthcare

Predict patient attrition using satisfaction scores, engagement metrics.

Data Card | Code (8) | Discussion (0) | Suggestions (0)

About Dataset

Context

Patient churn (attrition) is a critical challenge in healthcare, costing providers billions in lost revenue and disrupting continuity of care. Studies show:

- Acquiring a new patient costs 5-25x more than retaining an existing one
- 20-30% of patients switch providers annually
- Low satisfaction and poor engagement are primary drivers of churn

Usability
10.00

License
CC0: Public Domain

Expected update frequency
Quarterly

Tags
Classification

DATASET

patient_churn_dataset.csv (193.99 kB)

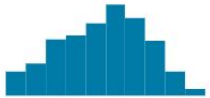
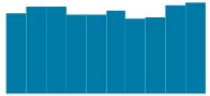
Detail | Compact | Column

10 of 21 columns

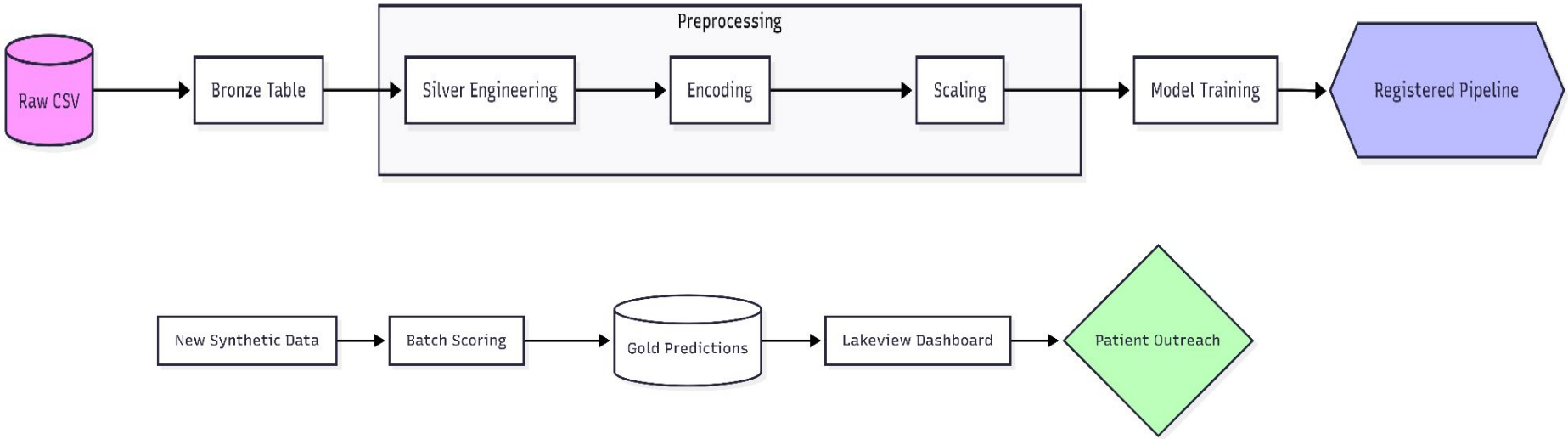
About this file

Suggest Edits

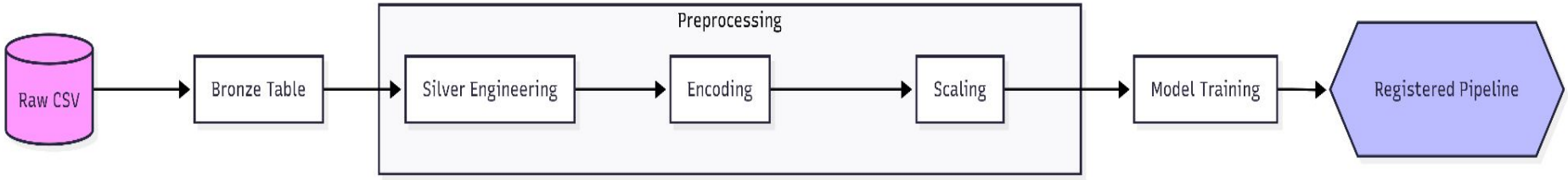
This file contains complete patient behavioral, satisfaction, and engagement data for binary classification (churn prediction). The dataset includes realistic churn patterns with approximately 15-25% churn rate, reflecting industry benchmarks. No missing values in critical fields.

PatientID Unique patient identif	Age Patient age in years	Gender	State	Tenure_Months	Specialty	Insuranc
2000 unique values	 18 90	Male 51% Female 49%	NC 13% IL 11% Other (1527) 76%	 1 120	General Practice 15% Orthopedics 14% Other (1409) 70%	Self-Pay Medicare Other (961)
C20000	41	Female	PA	62	Pediatrics	Medicaid
C20001	43	Female	GA	44	Internal Medicine	Self-Pay
C20002	21	Male	MI	120	Internal Medicine	Medicaid
C20003	65	Male	FL	118	General Practice	Private
C20004	18	Female	CA	70	Cardiology	Medicaid
C20005	65	Male	MI	82	Orthopedics	Self-Pay
C20006	82	Female	FL	56	Pediatrics	Medicare
C20007	66	Male	MI	22	General Practice	Private

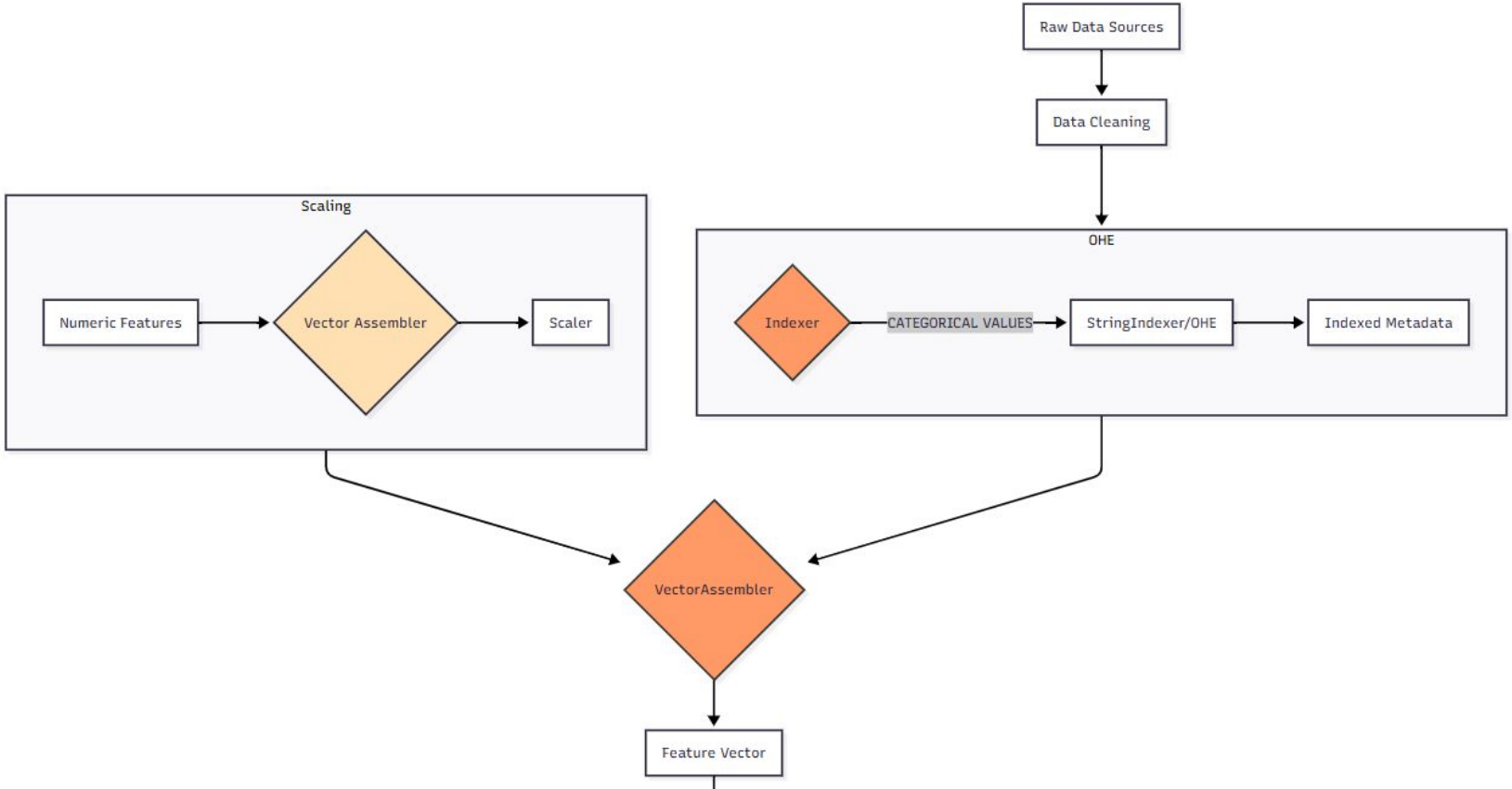
WORKFLOW


Raw CSV
Bronze Table
Preprocessing
Silver Engineering
Encoding
Scaling
Model Training
Registered Pipeline
New Synthetic Data
Batch Scoring
Gold Predictions
Lakeview Dashboard
Patient Outreach

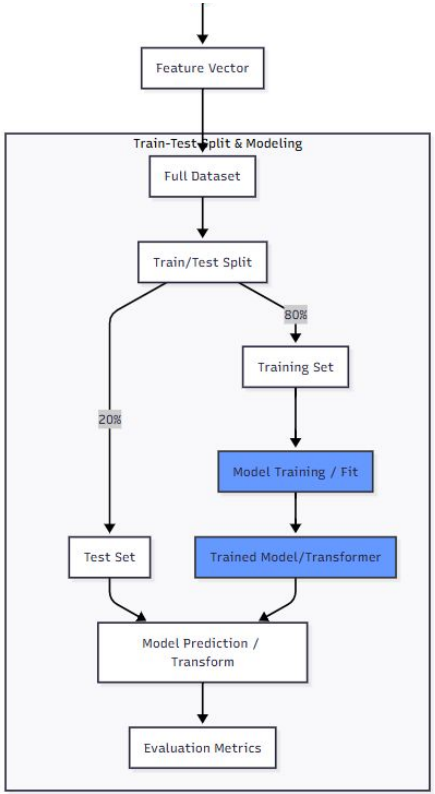
INITIAL ML TRAINING



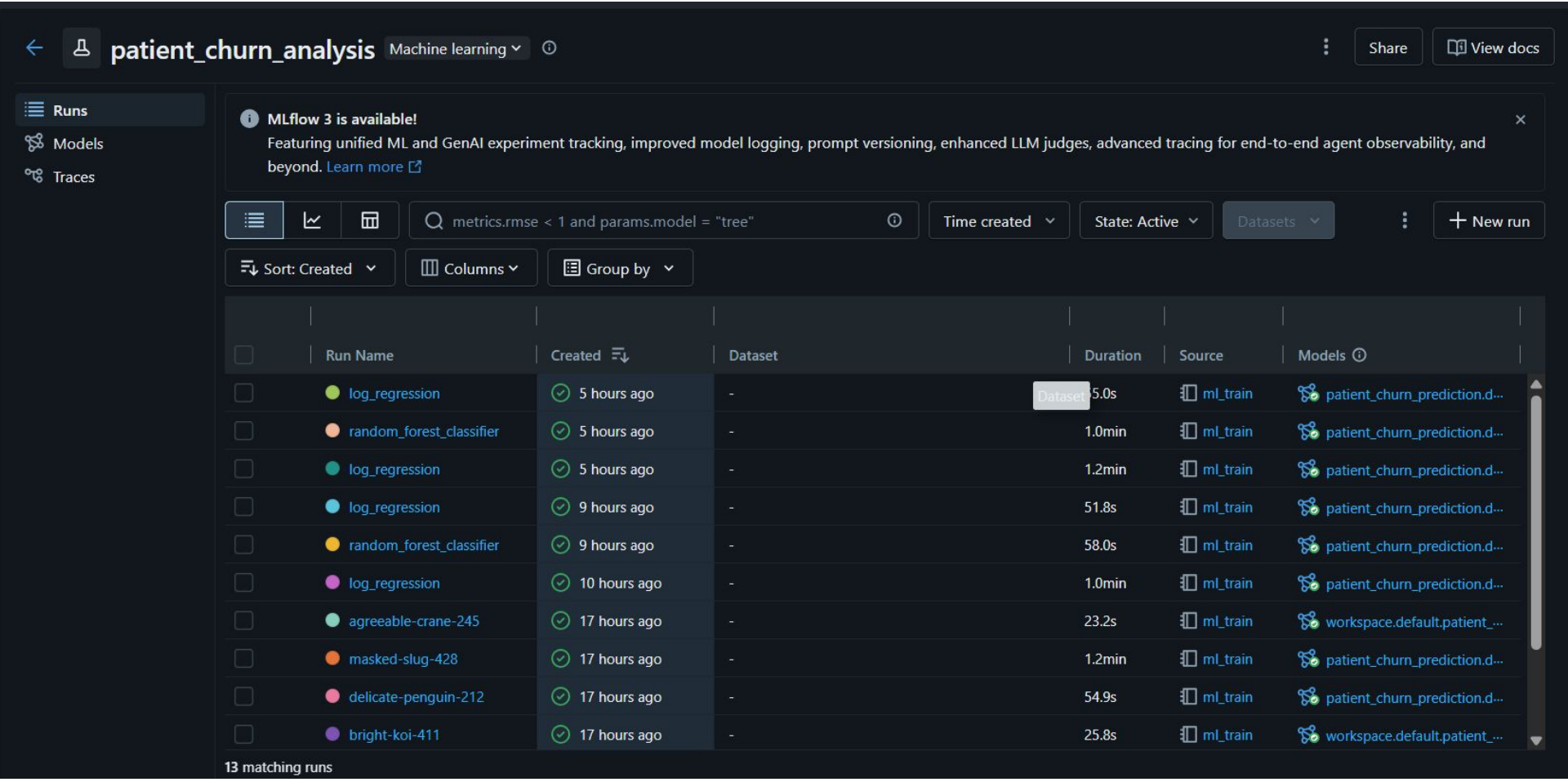
MODEL TRAINING WITH ML FLOW



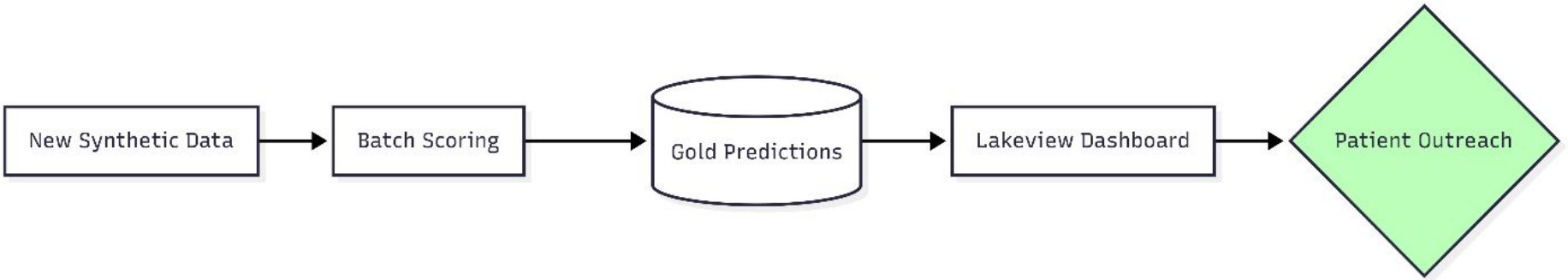
MODEL TRAINING WITH ML FLOW



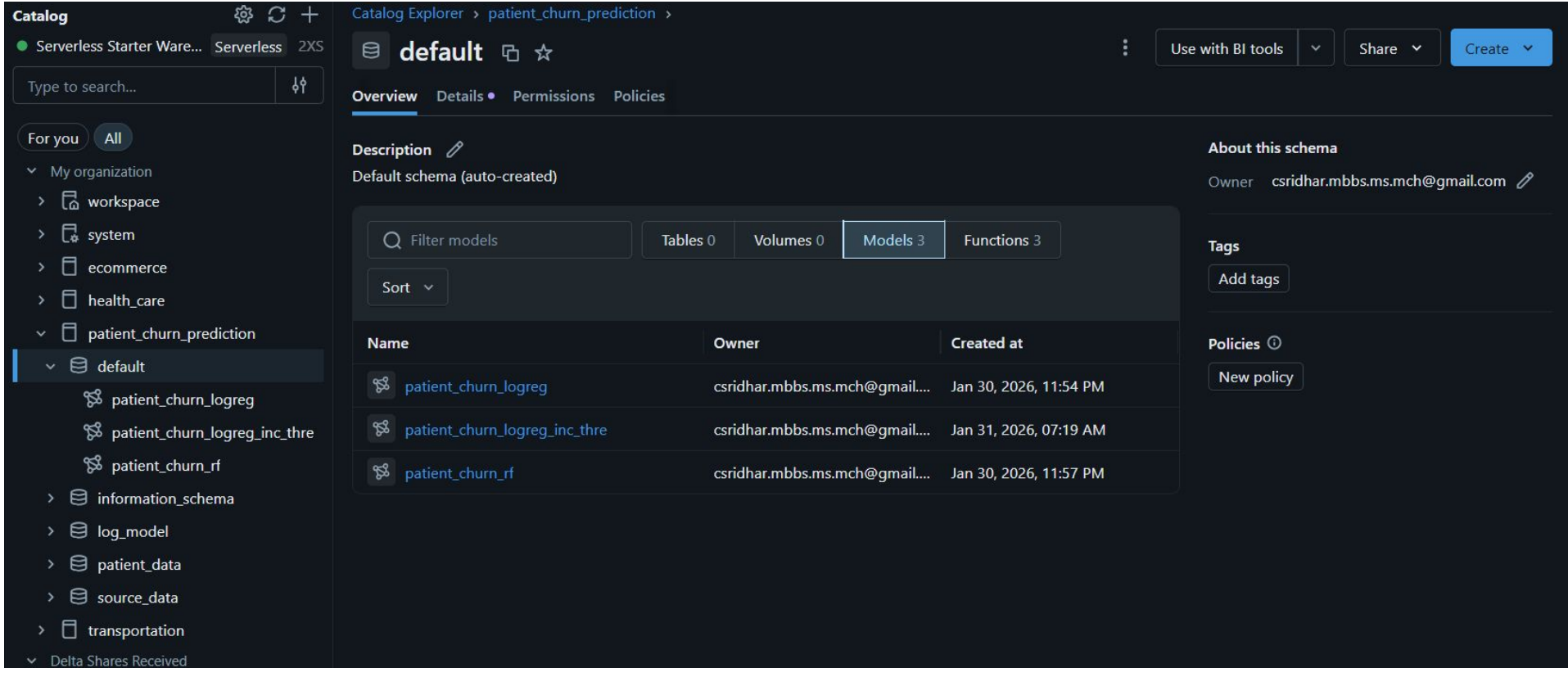
EXPERIMENTS



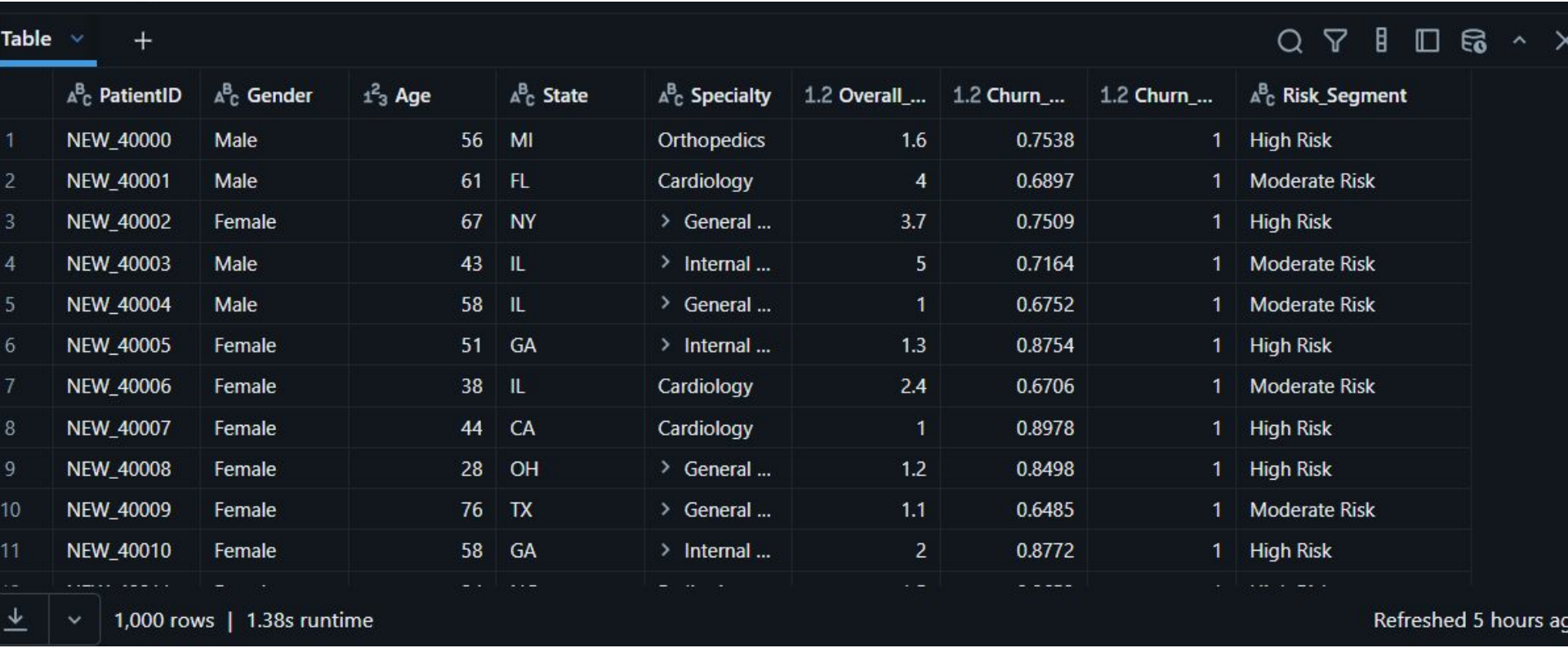
NEW SYNTHETIC DATA INGESTION



REGISTERED_MODEL



GOLD_TABLE



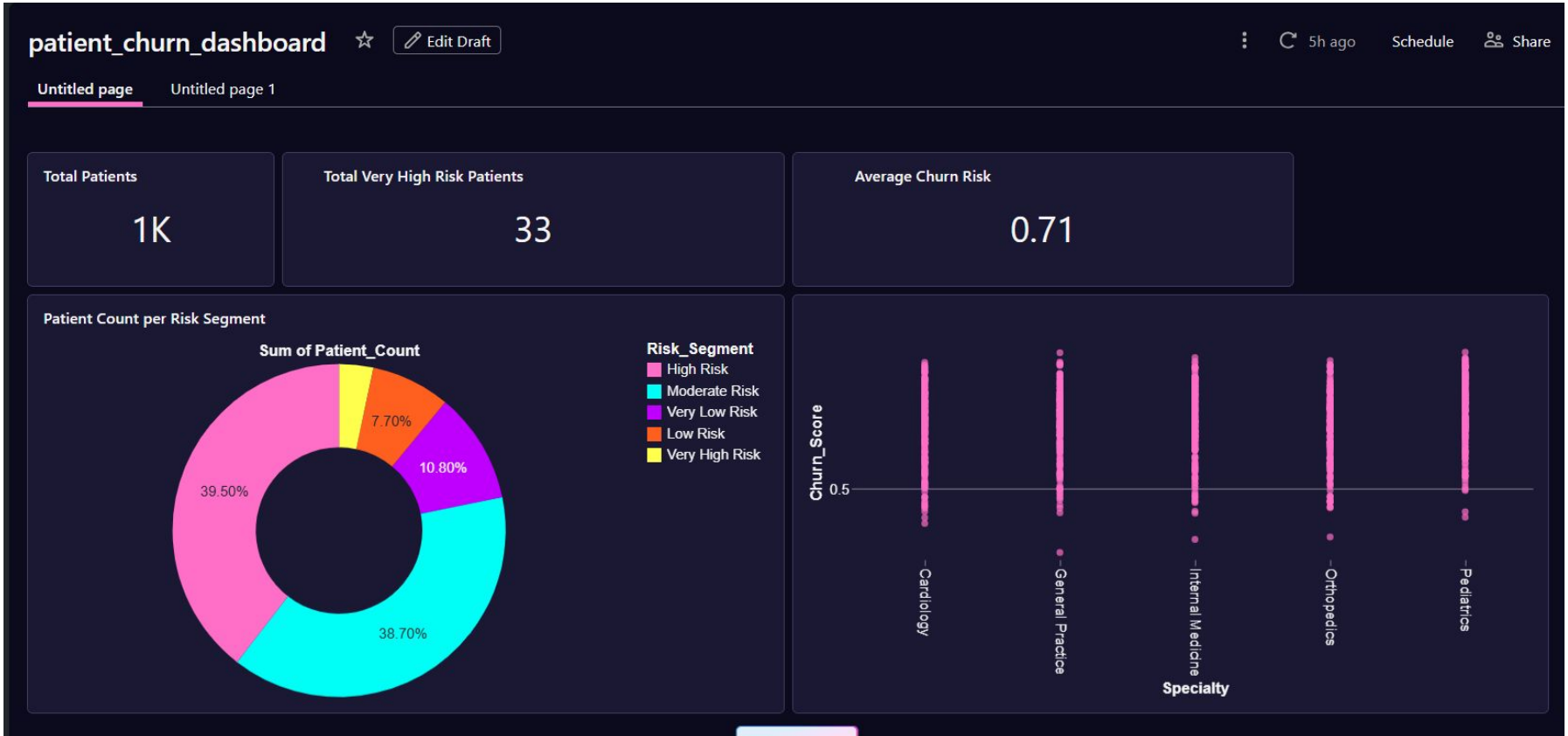
Table

	PatientID	Gender	Age	State	Specialty	Overall_...	Churn_...	Churn_...	Risk_Segment
1	NEW_40000	Male	56	MI	Orthopedics	1.6	0.7538	1	High Risk
2	NEW_40001	Male	61	FL	Cardiology	4	0.6897	1	Moderate Risk
3	NEW_40002	Female	67	NY	General ...	3.7	0.7509	1	High Risk
4	NEW_40003	Male	43	IL	Internal ...	5	0.7164	1	Moderate Risk
5	NEW_40004	Male	58	IL	General ...	1	0.6752	1	Moderate Risk
6	NEW_40005	Female	51	GA	Internal ...	1.3	0.8754	1	High Risk
7	NEW_40006	Female	38	IL	Cardiology	2.4	0.6706	1	Moderate Risk
8	NEW_40007	Female	44	CA	Cardiology	1	0.8978	1	High Risk
9	NEW_40008	Female	28	OH	General ...	1.2	0.8498	1	High Risk
10	NEW_40009	Female	76	TX	General ...	1.1	0.6485	1	Moderate Risk
11	NEW_40010	Female	58	GA	Internal ...	2	0.8772	1	High Risk

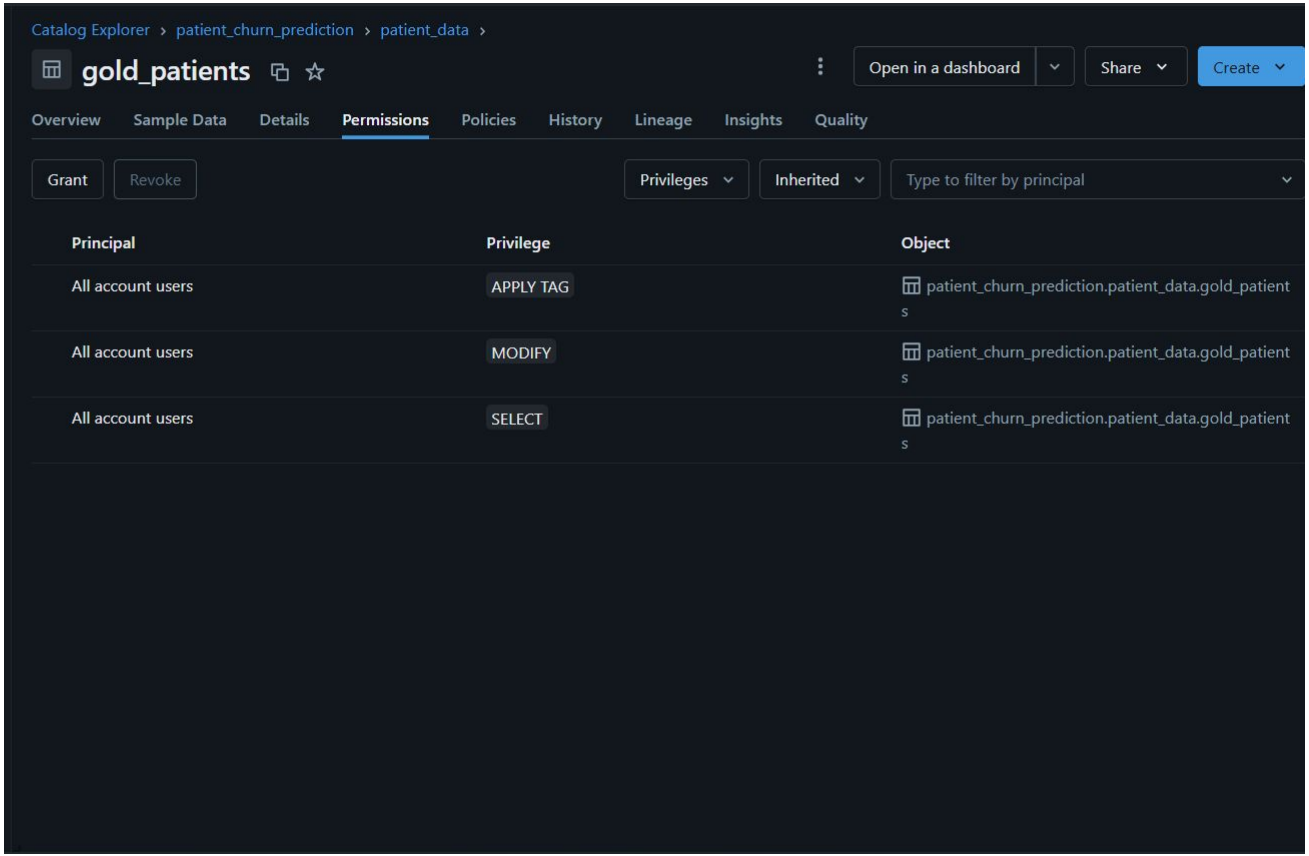
1,000 rows | 1.38s runtime

Refreshed 5 hours ag

DASHBOARD


patient_churn_dashboard
Edit Draft
5h ago
Schedule
Share
Untitled page
Untitled page 1
Total Patients
1K
Total Very High Risk Patients
33
Average Churn Risk
0.71
Patient Count per Risk Segment
Sum of Patient_Count
7.70%
10.80%
39.50%
38.70%
Risk_Segment
High Risk
Moderate Risk
Very Low Risk
Low Risk
Very High Risk
Churn_Score
0.5
Cardiology
General Practice
Internal Medicine
Orthopedics
Pediatrics
Specialty

GOVERNANCE


Catalog Explorer › patient_churn_prediction › patient_data ›
gold_patients
Open in a dashboard
Share
Create
Overview
Sample Data
Details
Permissions
Policies
History
Lineage
Insights
Quality
Grant
Revoke
Privileges
Inherited
Type to filter by principal
Principal
Privilege
Object
All account users
APPLY TAG
patient_churn_prediction.patient_data.gold_patients
All account users
MODIFY
patient_churn_prediction.patient_data.gold_patients
All account users
SELECT
patient_churn_prediction.patient_data.gold_patients

CONCLUSION
MODEL

- Requires more data or better feature engineering to train the model.

- Need to monitor new data to retrain the model

CONCLUSION
DATABRICKS

- Best unified platform where we can do end to end project.
- It Provides Unity Catalog Governance.
- It provides seamless connectivity to various other platform