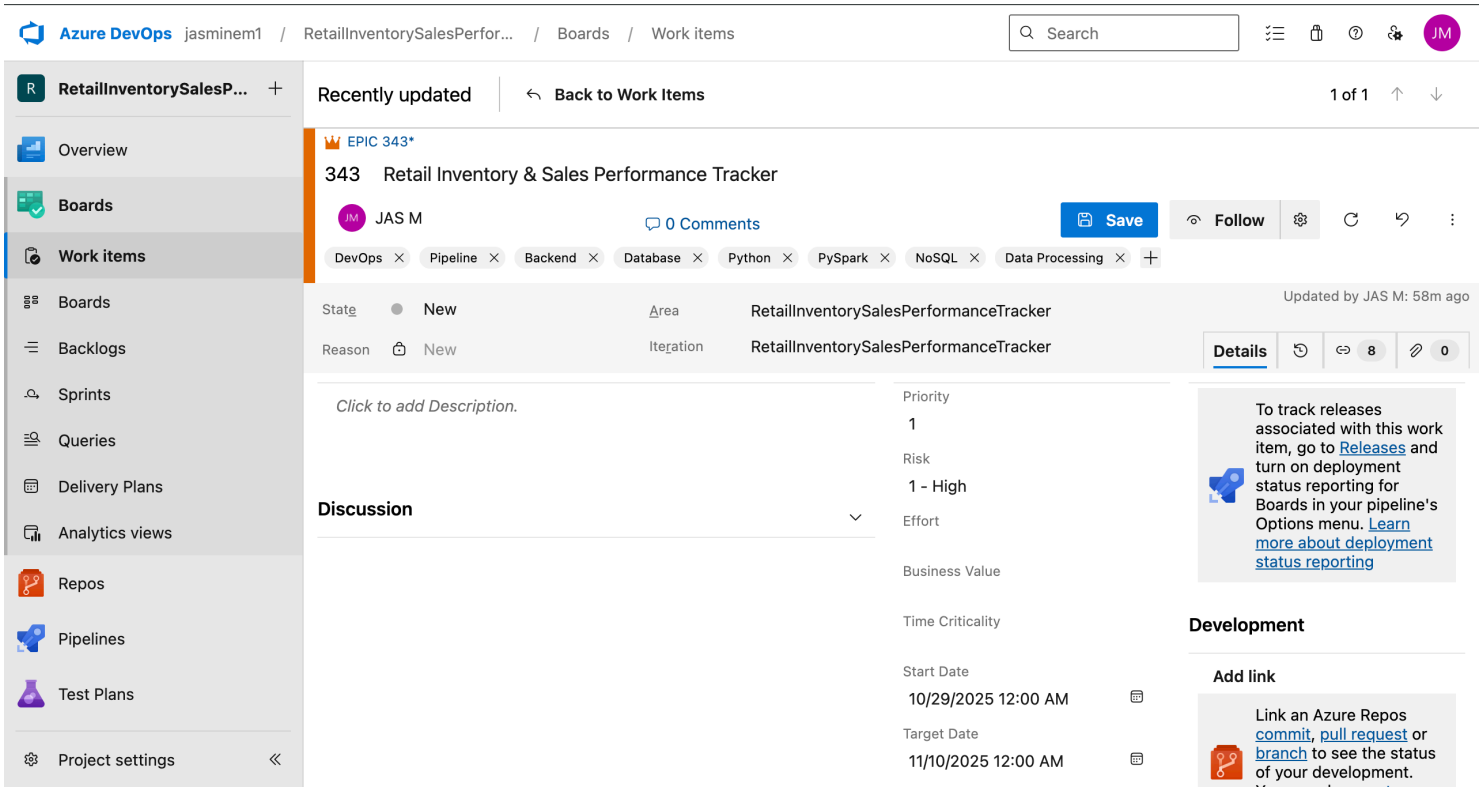
Retail Inventory & Sales Performance Tracker Screenshots:

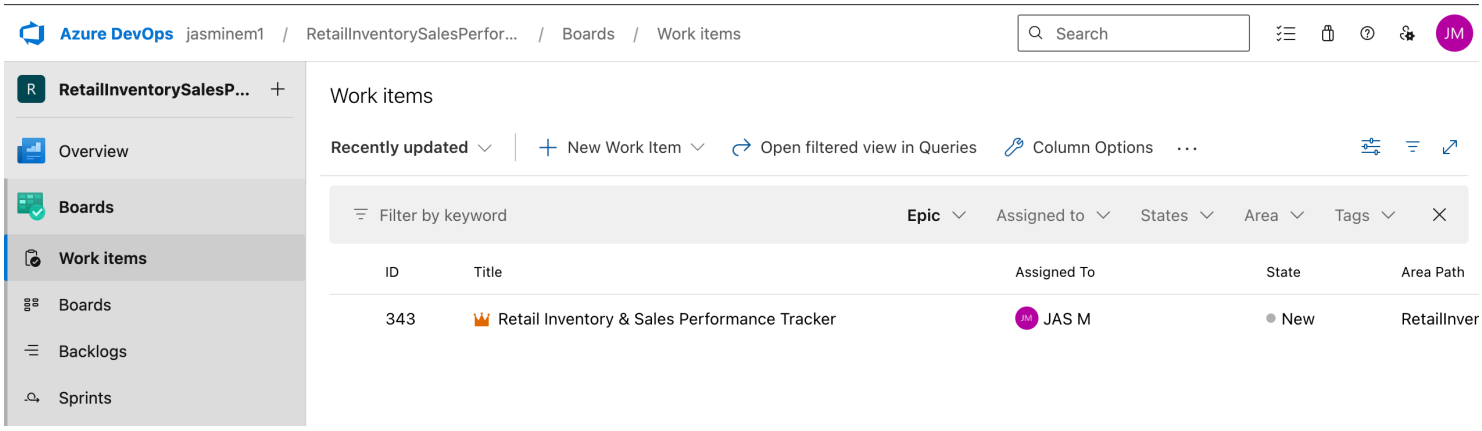
Objective:

Build a data-driven system that monitors product inventory levels, analyzes sales
performance, and provides actionable retail insights — using MySQL, MongoDB, Python,
PySpark, Azure Databricks (executed in Google Colab), and Azure DevOps.

Epic:

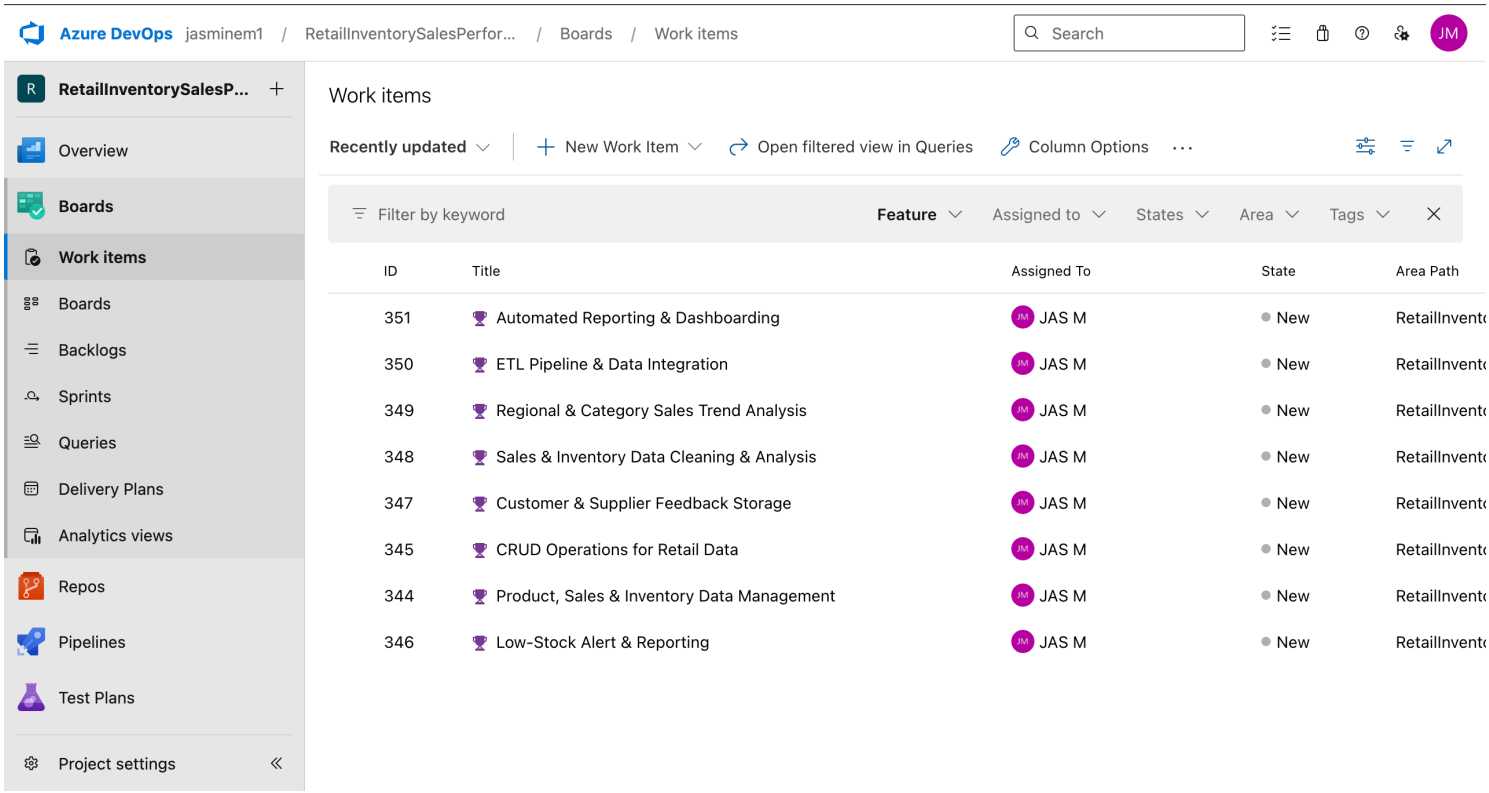
Retail Inventory & Sales Performance Tracker





Features:

- Product, Sales & Inventory Data Management
- CRUD Operations for Retail Data
- Low-Stock Alert & Reporting
- Customer & Supplier Feedback Storage
- Sales & Inventory Data Cleaning & Analysis
- Regional & Category Sales Trend Analysis
- ETL Pipeline & Data Integration
- Automated Reporting & Dashboarding



User Stories:

Product, Sales & Inventory Data Management

- MySQL Product Table
- MySQL Sales Table
- MySQL Inventory Table

CRUD Operations

- Add, edit, and delete product data
- Add, edit, and delete sales data

Low-Stock Alert & Reporting

- Stored procedure to identify low-stock items

Customer & Supplier Feedback Storage

- Store unstructured feedback in MongoDB
- Efficient feedback search by product_id

Sales & Inventory Data Cleaning & Analysis

- Clean sales and inventory data from CSV/API
- Calculate monthly sales and inventory turnover metrics

Regional & Category Sales Trend Analysis

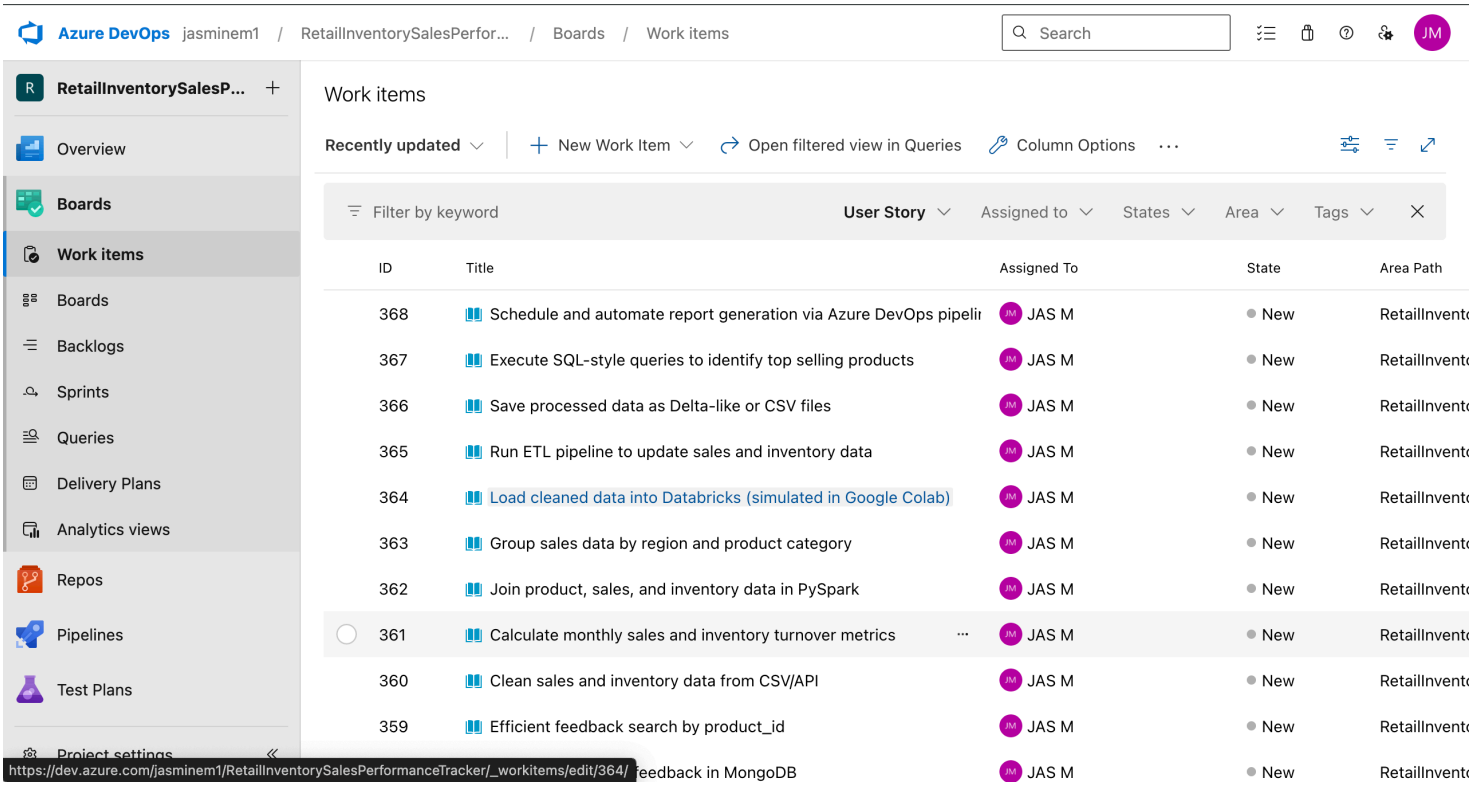
- Join product, sales, and inventory data in PySpark
- Group sales data by region and product category
- Export aggregated sales trend data

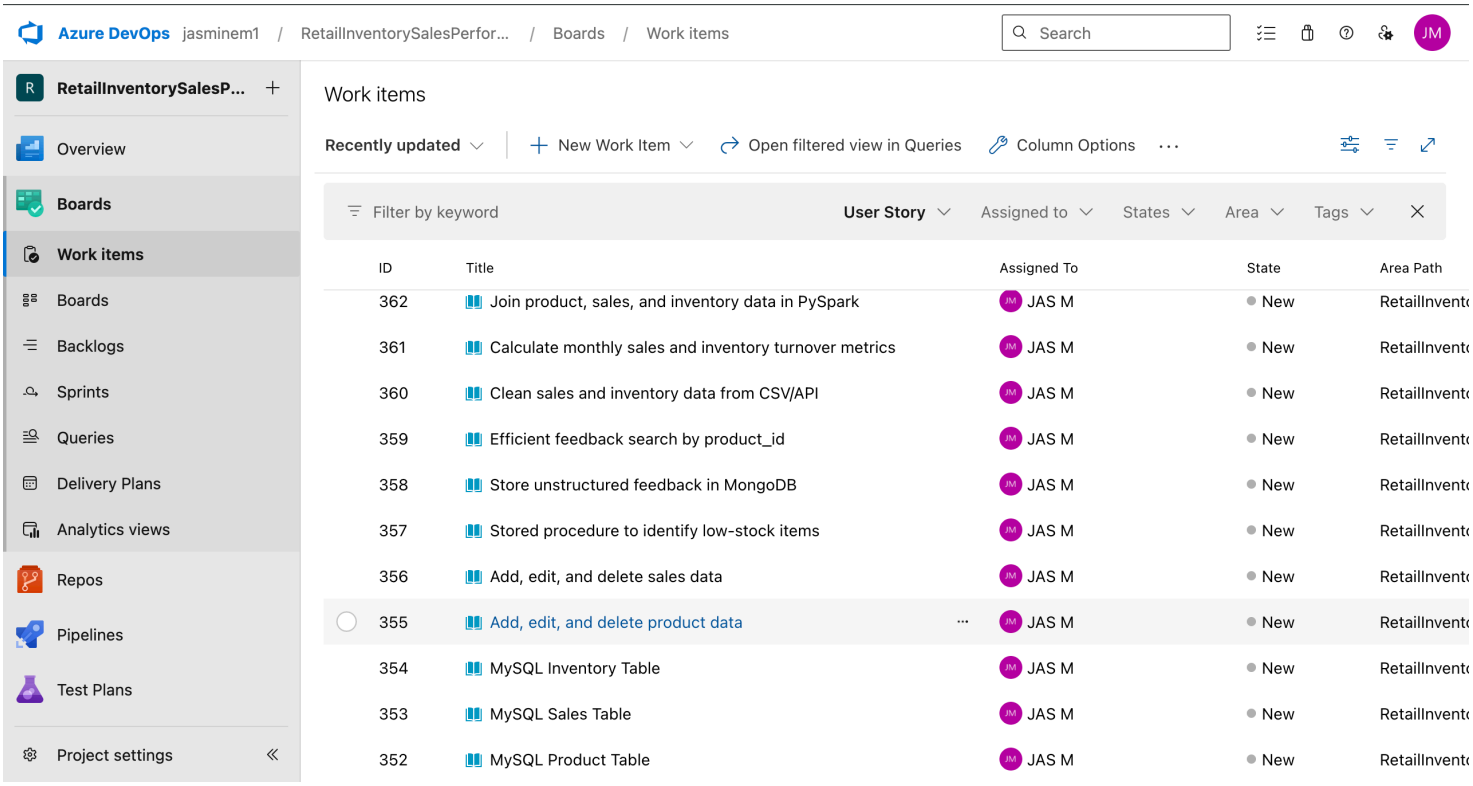
ETL Pipeline & Data Integration

- Load cleaned data into Databricks (simulated in Google Colab)
- Run ETL pipeline to update sales and inventory data
- Save processed data as Delta-like or CSV files

Automated Reporting & Dashboarding

- Execute SQL-style queries to identify top selling products
- Schedule and automate report generation via Azure DevOps pipeline





Tasks:

MySQL Product Table
- Design and create Product table schema
- Implement CRUD operations for products

MySQL Sales Table
- Design and create Sales table schema
- Implement CRUD operations for sales

MySQL Inventory Table
- Design and create Inventory table schema

Low-Stock Alert
- Write stored procedure to identify low-stock products

MongoDB Feedback Storage
- Design JSON schema for customer/supplier feedback
- Insert sample feedback documents
- Create indexes for product_id for fast lookup

Data Cleaning & Processing (Python)
- Develop Python script to load and clean sales and inventory data
- Calculate monthly sales and inventory turnover with NumPy

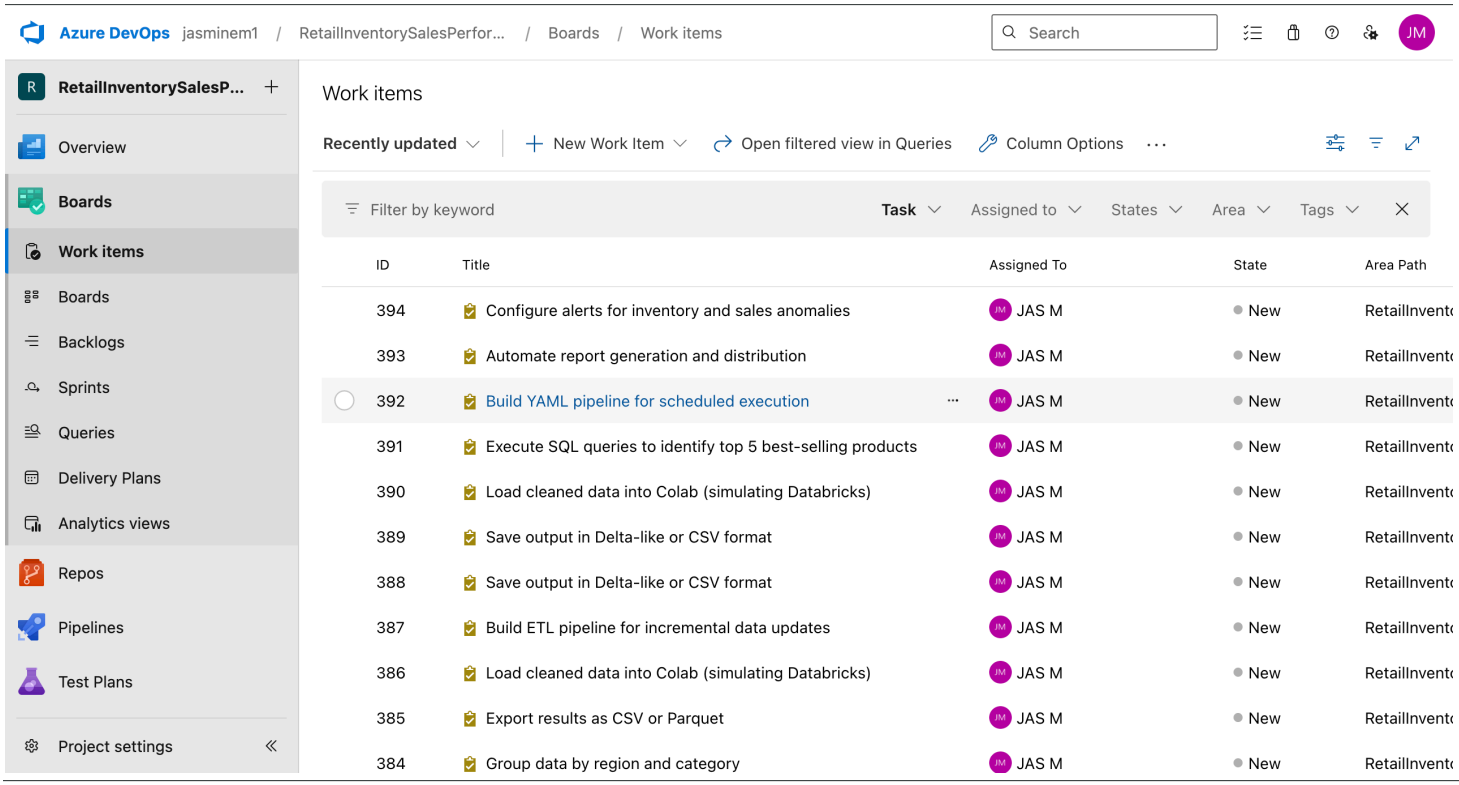
Sales Trend Analysis (PySpark)
- Load and join sales, product, and inventory data using PySpark
- Group data by region and category
- Export results as CSV or Parquet

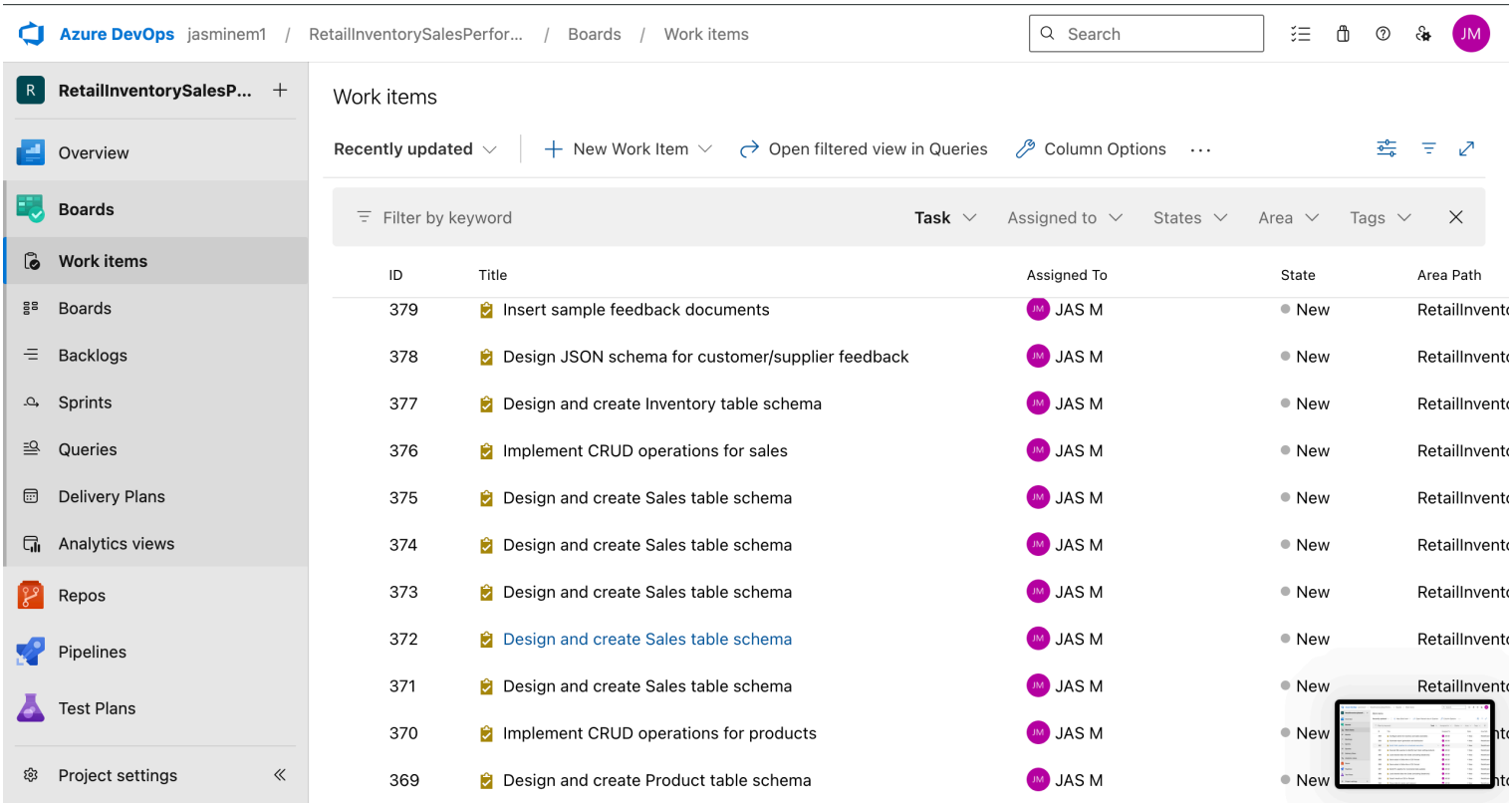
ETL Pipeline (Google Colab/Databricks)

- Load cleaned data into Colab (simulating Databricks)
- Build ETL pipeline for incremental data updates
- Save output in Delta-like or CSV format
- Execute SQL queries to identify top 5 best-selling products

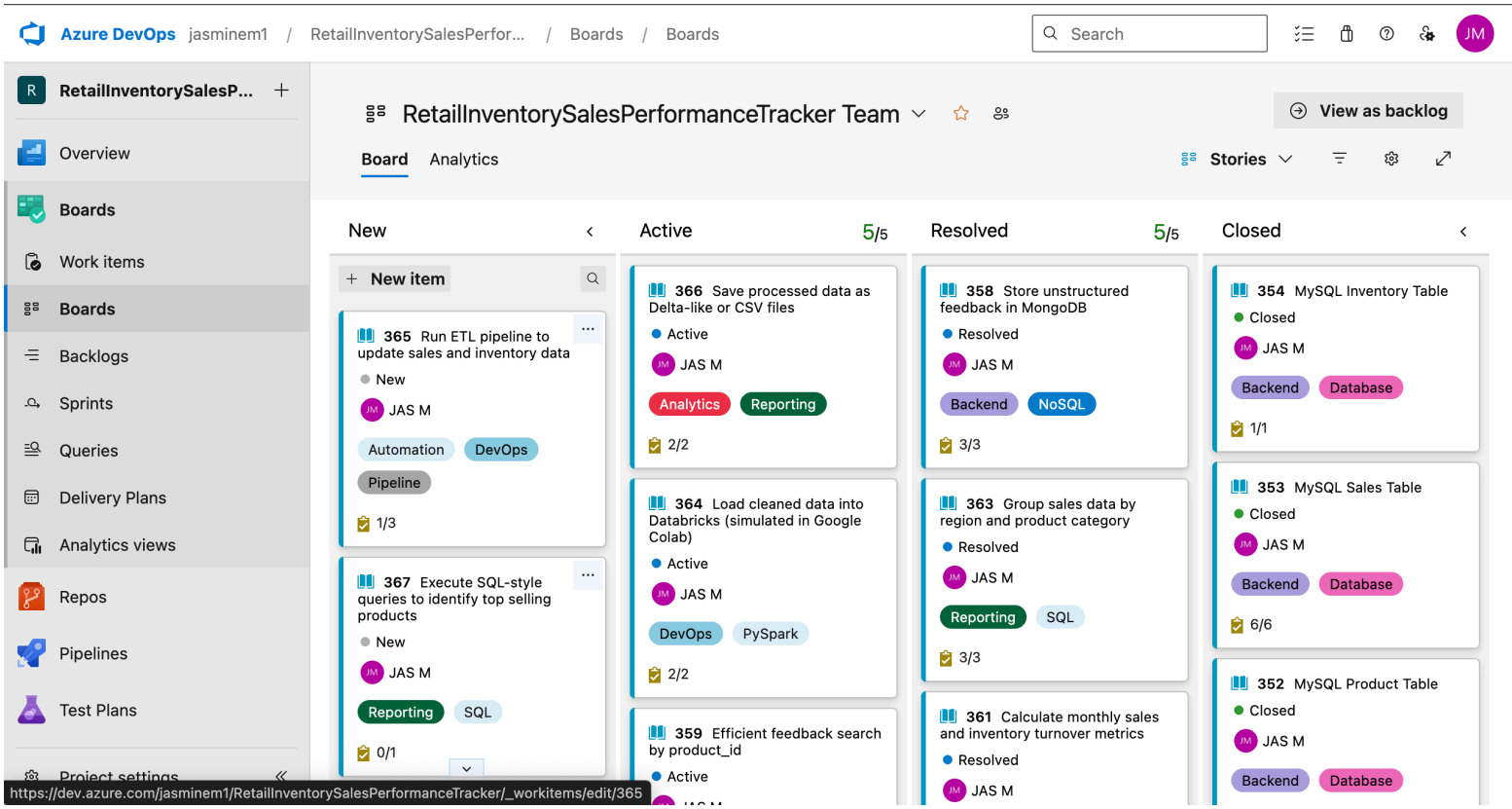
Automated Reporting (Azure DevOps)

- Build YAML pipeline for scheduled execution
- Automate report generation and distribution
- Configure alerts for inventory and sales anomalies





BOARD:



BACKLOG: