

MARKET DATA PIPELINE & DASHBOARD REPORT

1. Project Overview

Purpose: Extract, transform, analyze, and visualize market data and strategy results.

2. Pipeline Steps

- 1 Data extraction and cleaning (extract_clean.py)
- 2 Feature engineering with technical indicators (feature_engineer.py)
- 3 Hidden Markov Model regimes detection (hmm_regimes.py)
- 4 Strategy backtesting (strategy_backtest.py)
- 5 LSTM sequence modeling (train_lstm.py)
- 6 Anomaly detection and explanation (anomaly_explain.py)

3. Key Data Files

Raw and processed data stored under /data

Key tables: feature_engineered_data1.csv, regimes.csv, trade_ledger1.csv

4. Power BI Dashboard Highlights

- 1 Line chart with price close and EMA
- 2 Regime timeline area chart
- 3 Trade ledger with PnL and win rate table
- 4 KPI cards summarizing overall performance

5. Refresh Process

- 1 Open Power BI and refresh dataset
- 2 Schedule refresh on Power BI service (optional)
- 3 Ensure data files are up to date

6. Results Summary

- 1 Market regimes identified with HMM
- 2 Strategy performance with cumulative PnL and trade analytics
- 3 Anomalies explained with SHAP values

7. Contact

[Abhishek Thasal]