

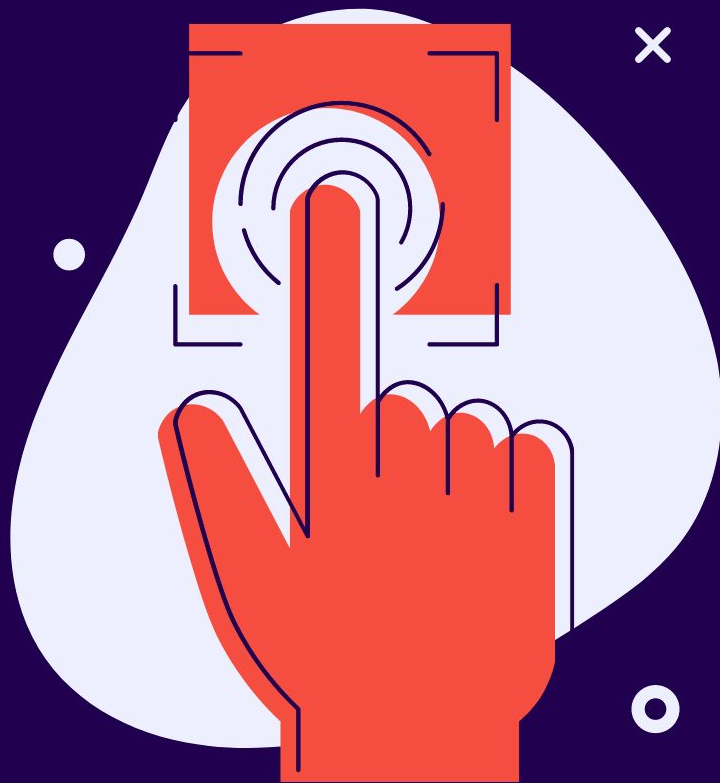


MATIX

manufacturing optimization engine

team **enigma**

IIIT Bhubaneswar



team **enigma**



SANJIBAN SENGUPTA

Machine Learning
Backend Development
Data Management
Project Concept



ANANYA APRAMEYA

Backend Development
Model Integration
Framework Development
Project Design



SARTHAK DAS

Frontend Development
Project Design
Data Management
Framework Management



SARTHAK BRAMHA

Frontend Development
Logic Development
Project Concept
Framework Development



Problem Statement

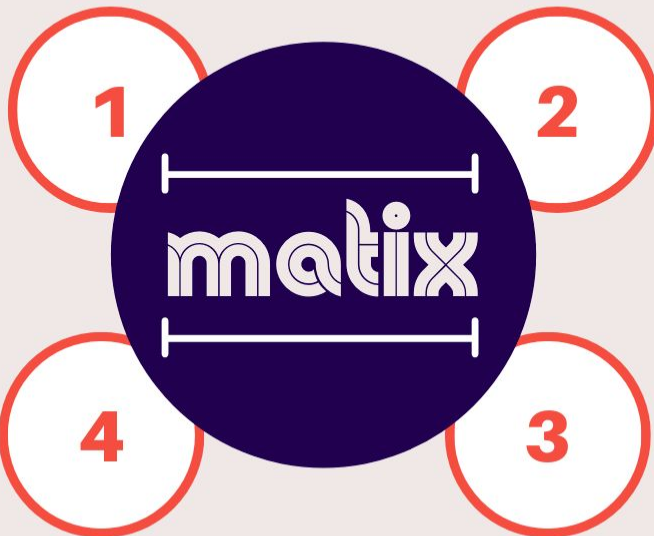


CURRENT MANUFACTURING

User interface presenting
current manufacturing
layout

FACTORY LAYOUT

Featuring factory layout
providing functionality for
complete order flow.



OPTIMIZING MANUFACTURING

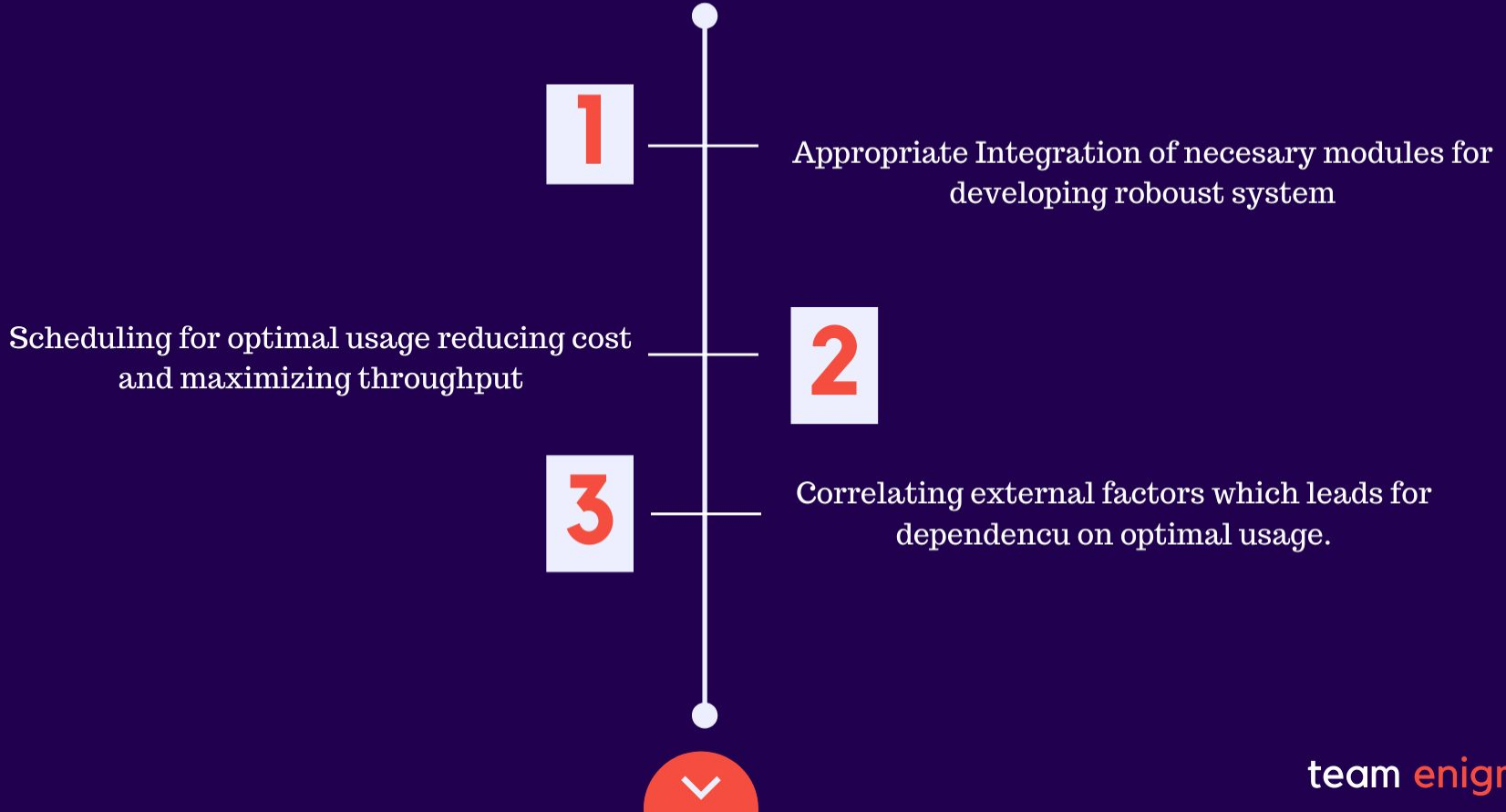
Optimal usage of manufacturing lines
prioritizing current orders, backlogs,
demand forecast

DEMAND FORECAST

Forecasting demand based
on previous data and
dynamic factors.



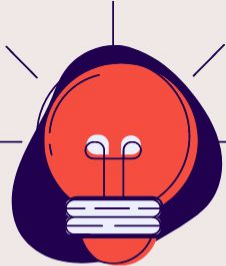
Challenges





Solution

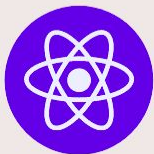
A robust framework interface featuring manufacturing orders functionality with forecasting future demand to find the optimal usage of lines.



TECH STACK

matix

Web Application Development



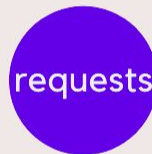
Database Management System

sqlite3

Machine Learning



Data Mining & API

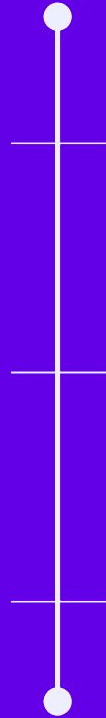


team **enigma**



DEMO





Notifier feature to
changes lines

Buffer inventory
management

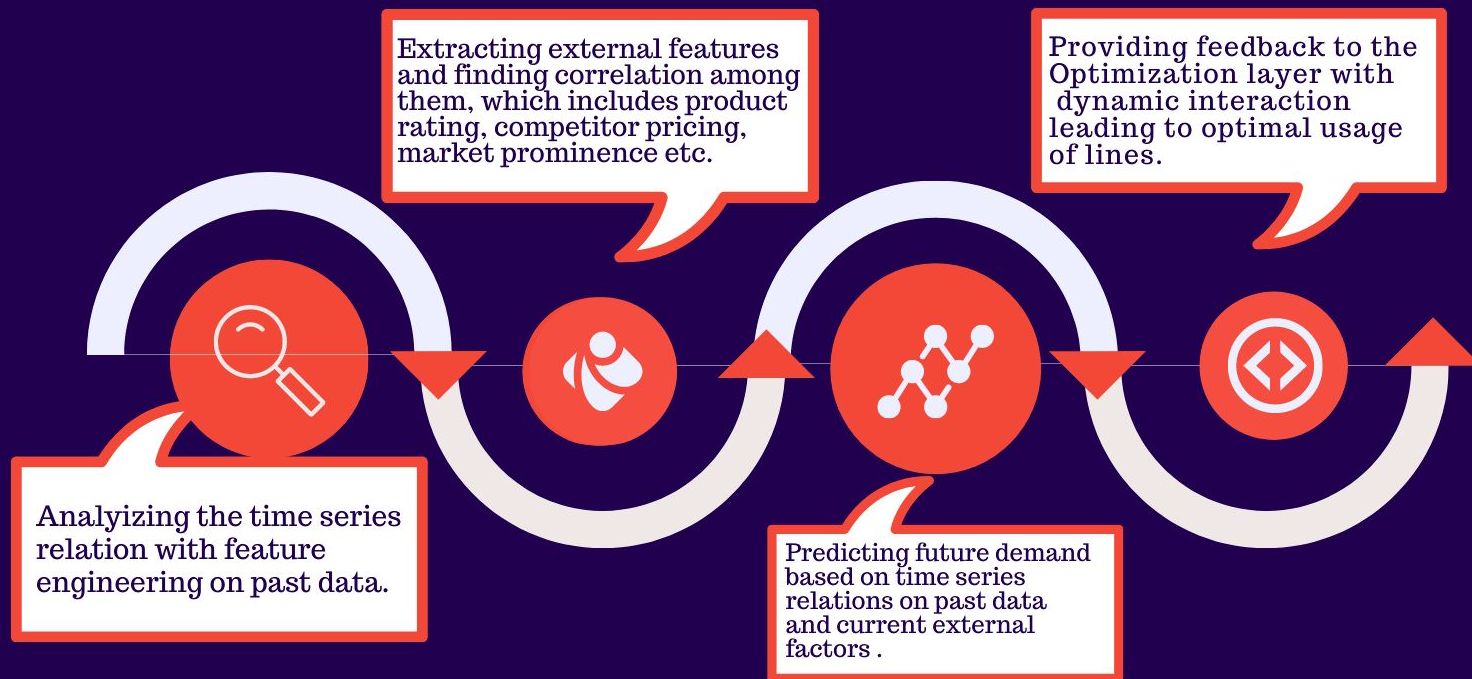
Better prediction
with roboustness

Future scope

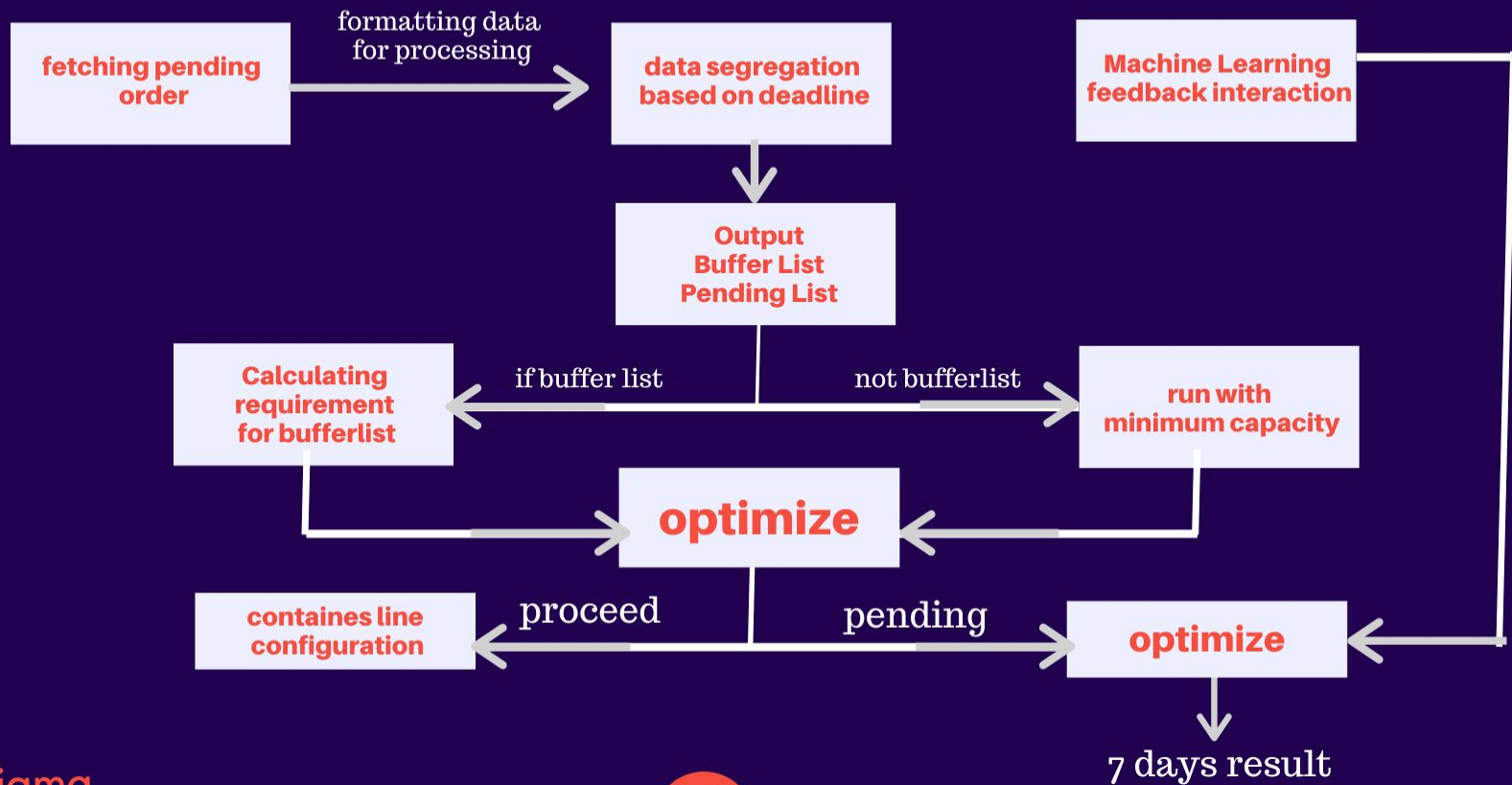


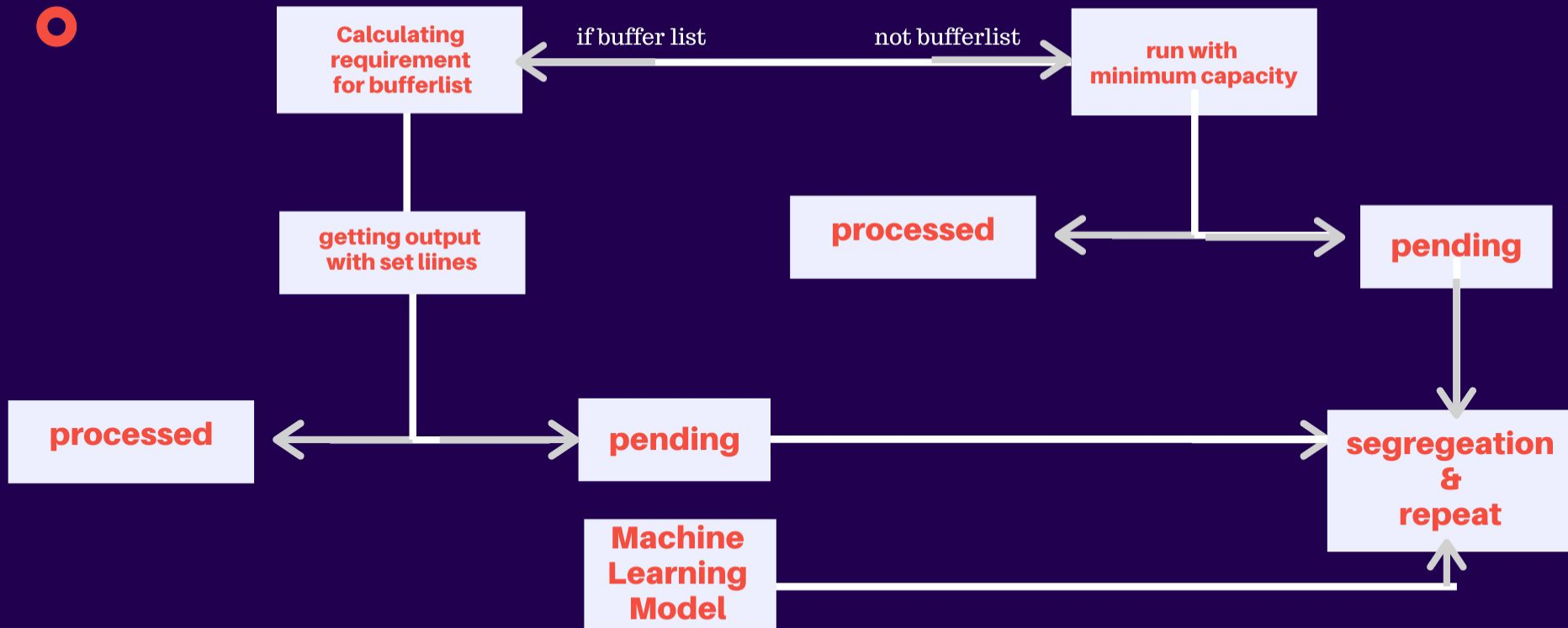


machine learning layer



Optimization Layer





Demo Dataset: [2 9s, 6 2s]

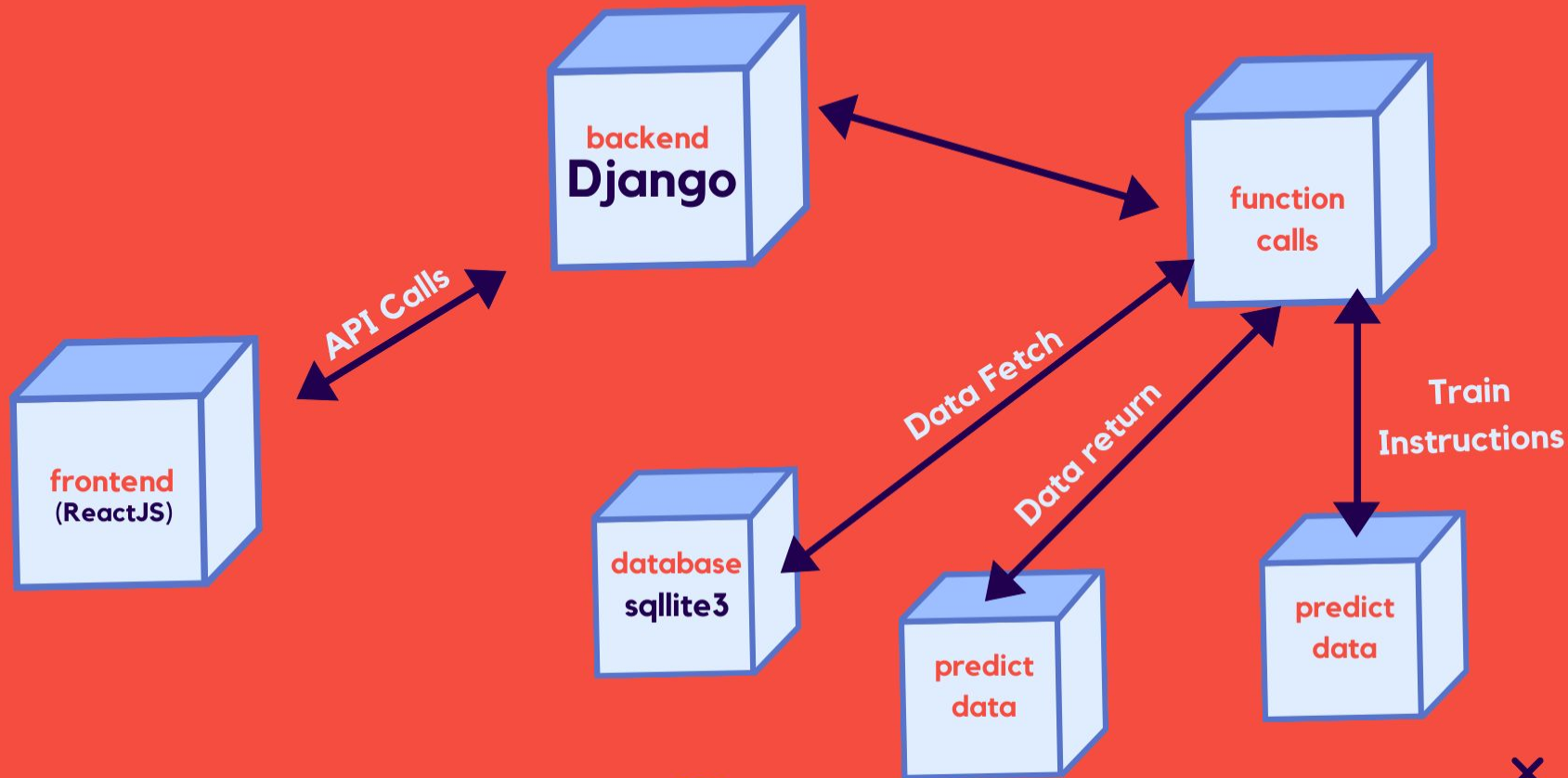
Lines: 3

Solution: [9,9,12]

Optimized Solution: [9,11,10] (saved 1 hour)



What's in the backend?



Thank you!

