



Predict sales with precision

# Agenda

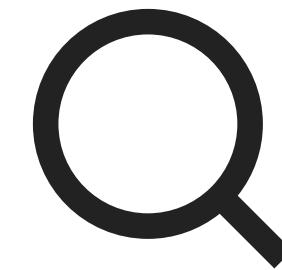
- Problem Identification
- Project Aim
- System Design
- Technology Stack
- Demonstration
- Model Evaluation
- Skills Gained
- Individual Contribution



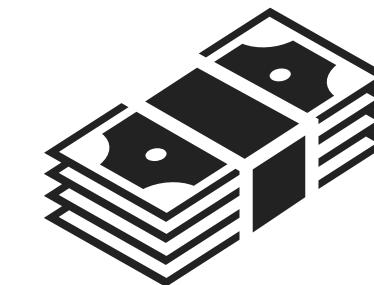
# Problem Identification



Product  
**Wastage**



Forecast  
**Demand**



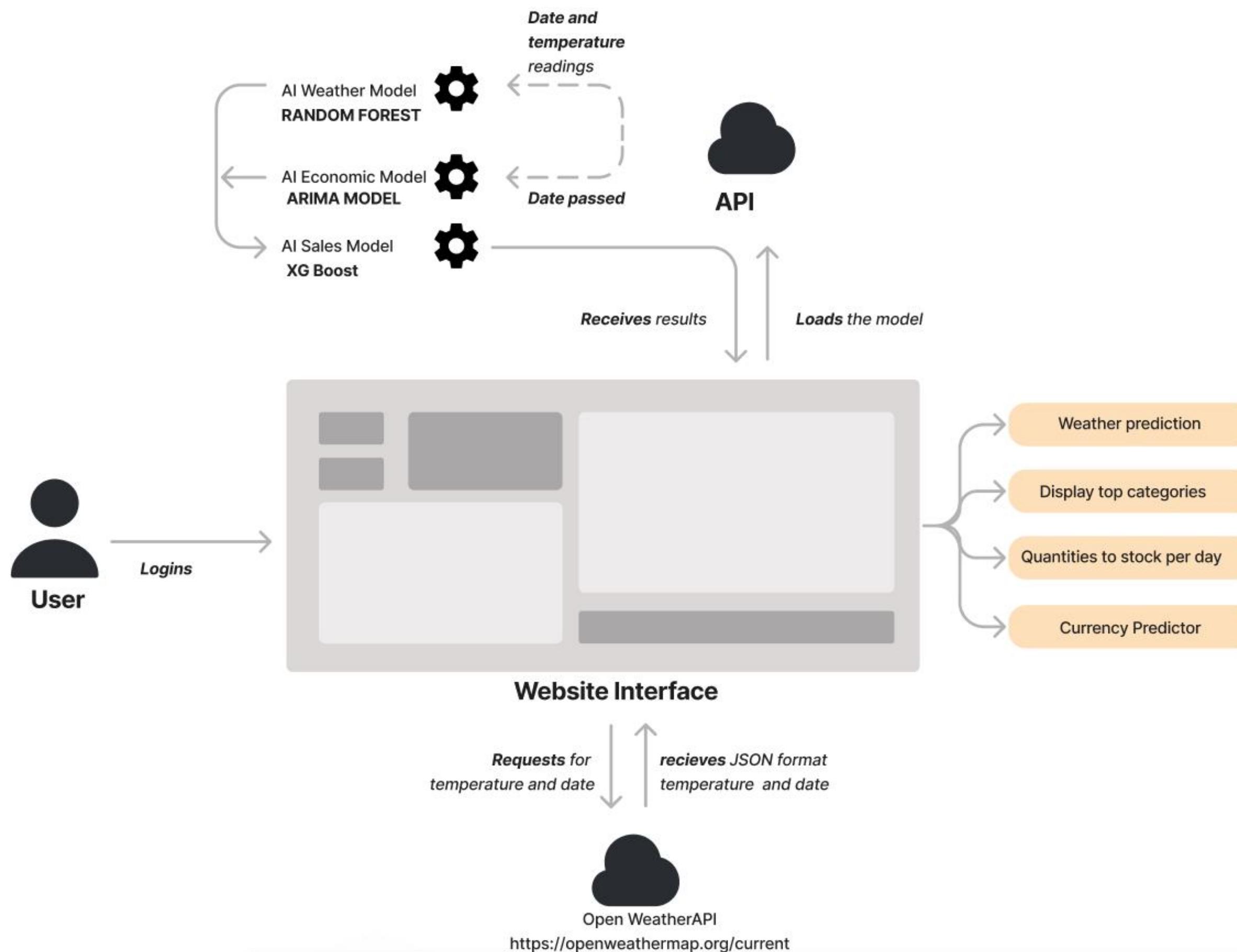
Increase  
**Profit**

# Project Aim

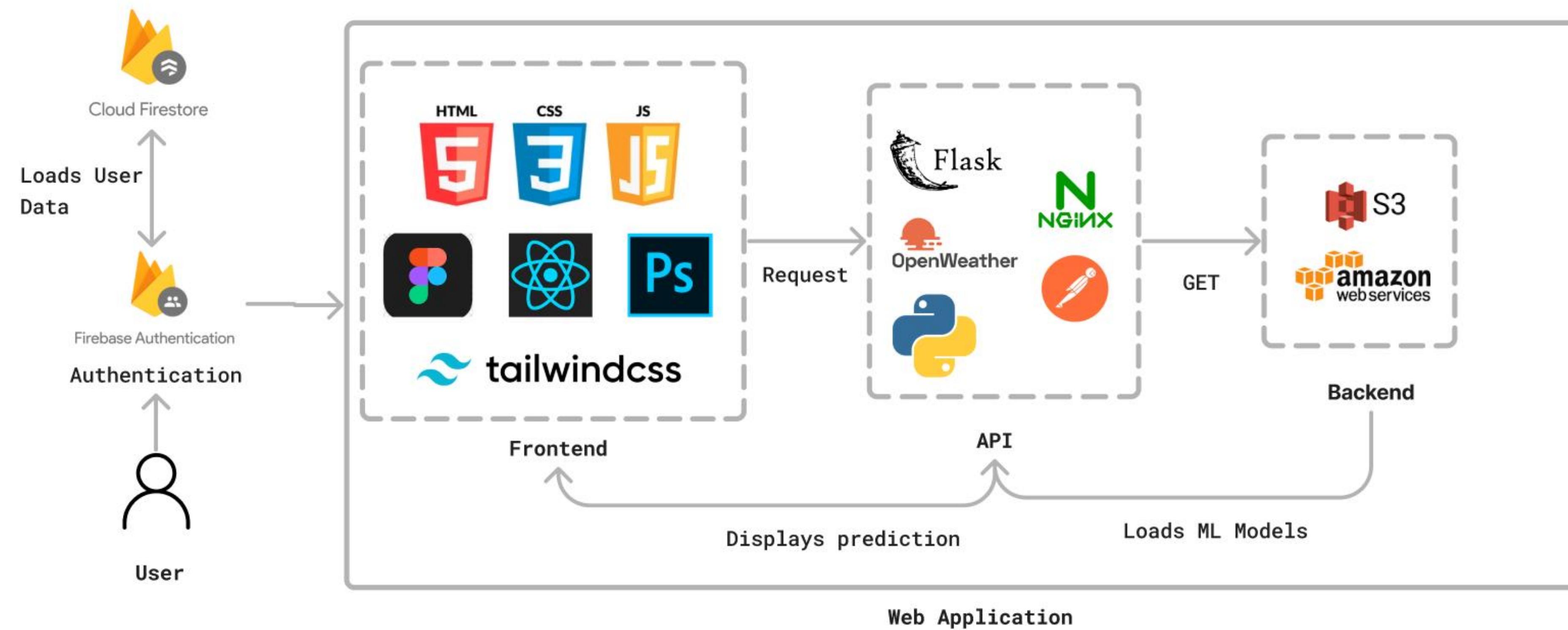
Blending Weather and Economic factors to predict sales of a product .



# System Design



# Technology Stack



# Demonstration

# Weather Model

Algorithm: **Random Forest Regressor**

Test Size: **20%** of the dataset

RMSE on Training data: **6.15**

RMSE on Testing data: **16.18**

# Economic Model

Algorithm: **Autoregressive integrated moving average**

Test Size: **30%** of the dataset

RMSE: **25.99**

MAE: **4.082**

# Sales Model (I)

Algorithm: **XGBoost Regressor**

Test Size: **40%** of the dataset

RMSE on Training data: **33.7**

RMSE on Testing data: **35**

# Sales Model (II)

Algorithm: **Random Forest Regressor**

Test Size: **40%** of the dataset

RMSE on Training data: **39.37**

RMSE on Testing data: **29.86**

# Challenges Encountered

- Data Collection
- Data Quality
- Learning Curve
- Model Deployment
- Product Hosting



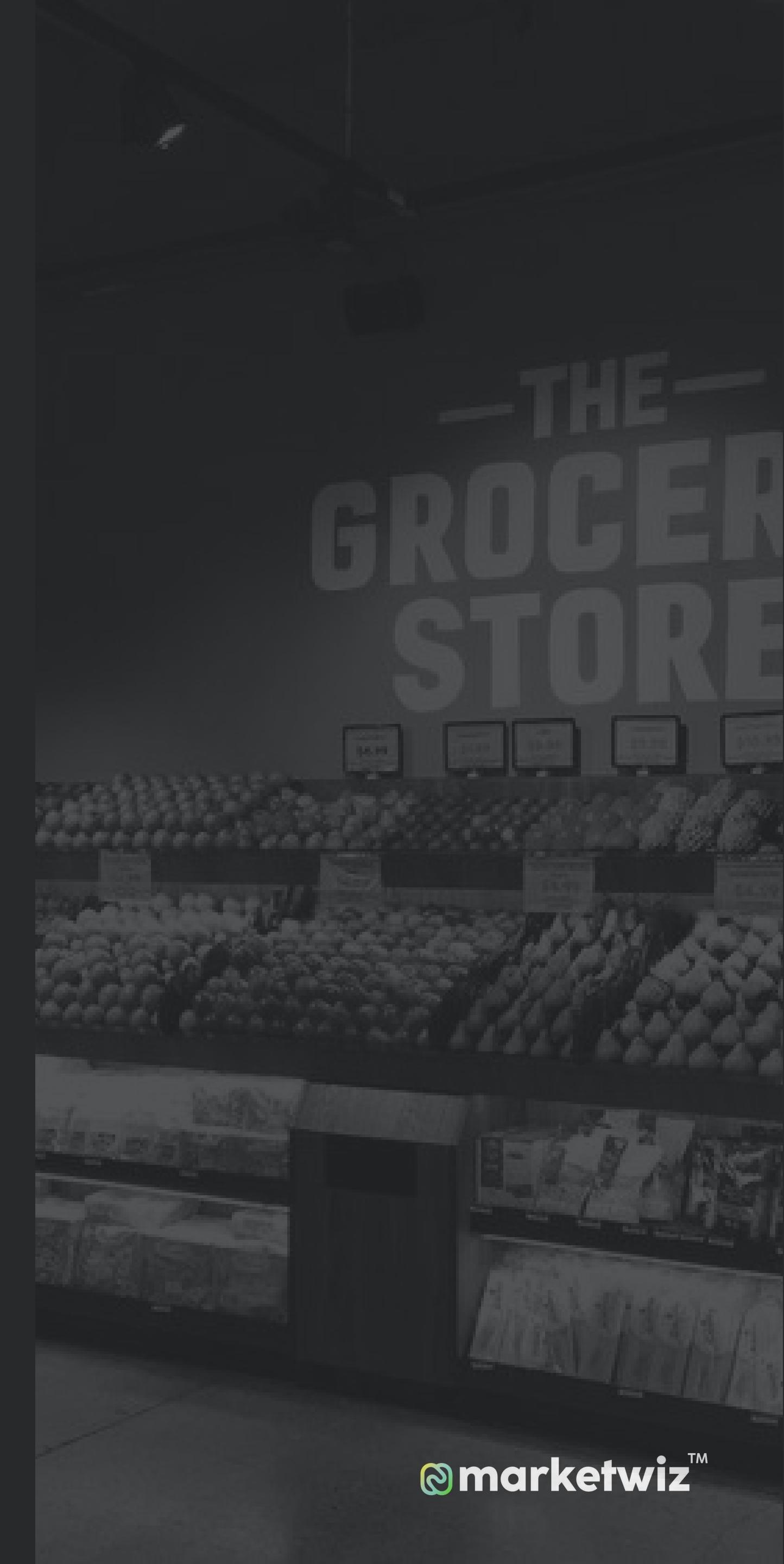


# Future of marketwiz

Support for **mobile platform**

Predict for wide **range of products**

Use more **economic factors**



# Skills Acquired

- Machine Learning and Deep Learning
- Front End frameworks
- Back End frameworks
- Integration techniques
- Authentication frameworks

# Existing Skill Usage

- Python programming
- Technical writing and documentation skills
- Team working
- Project management and task delegation

# Hammaad Rizwan



- ML Engineer for Sales prediction model
- Cleaned and Processed Tabular sales data
- Visualized supermarket sales data
- Responsible for product UI/ UX
- Conducted API testing in postman

# Praveen Rajes



- ML Engineer for the Economic model
- Cleaned and processed GBP data
- Conducted functional testing on inputs
- Developed the Signup and login pages
- Researched on API implementation

# Aadhavan Arkhash Saravanakumar



- ML Engineer for Sales Prediction
- Conducted interviews with domain experts
- Built Flask API
- Developed the Dashboard of the site
- Overlooked the documentation of the app

# Sevindu Imsara



- ML Engineer for the Weather model
- Cleaned and processed weather data
- Lead Technical writer
- Illustrated the system's design
- Documented the project

A photograph of a deliveryman wearing a blue cap, glasses, and a blue vest over a light shirt, smiling while holding several cardboard boxes. He is standing in front of a white van. A circular graphic with a blue-to-white gradient is overlaid on the bottom right.

# Wrap Up

- Problem Identification
- Solution
- Technology Stack and Design
- Model Evaluation and Testing
- Limitations and Improvements
- Individual contribution