

Trendcast

Demand Forecast for Fashion Retailers



Team: Paranormal Distribution

Stock-outs cause walkouts

Retailers can lose nearly half of intended purchases when customers encounter stock-outs

4%

Average yearly loss due to abandoned purchases

\$40 M

Yearly loss to a billion-dollar retailer

72%

Stock-outs due to inefficient ordering practices



Retail sales and weather, huh?

We wanted to know how weather affects the consumer behaviour and turn this information to benefit the retailers by facilitating better stocking and shelving of products.



Does weather matter?

How weather affects the store sales and how would it benefit you?

How do I find its impact?

How do we know the extent influence of weather over sales?

How accurate are we?

Since weather itself cannot be predicted accurately, how precise are we in predicting its effect on sales?



Trendcast

Our AI powered web app allows you to predict changes in sales due to variation in weather.

Ready to gain an edge over competitors?

Follow the trend

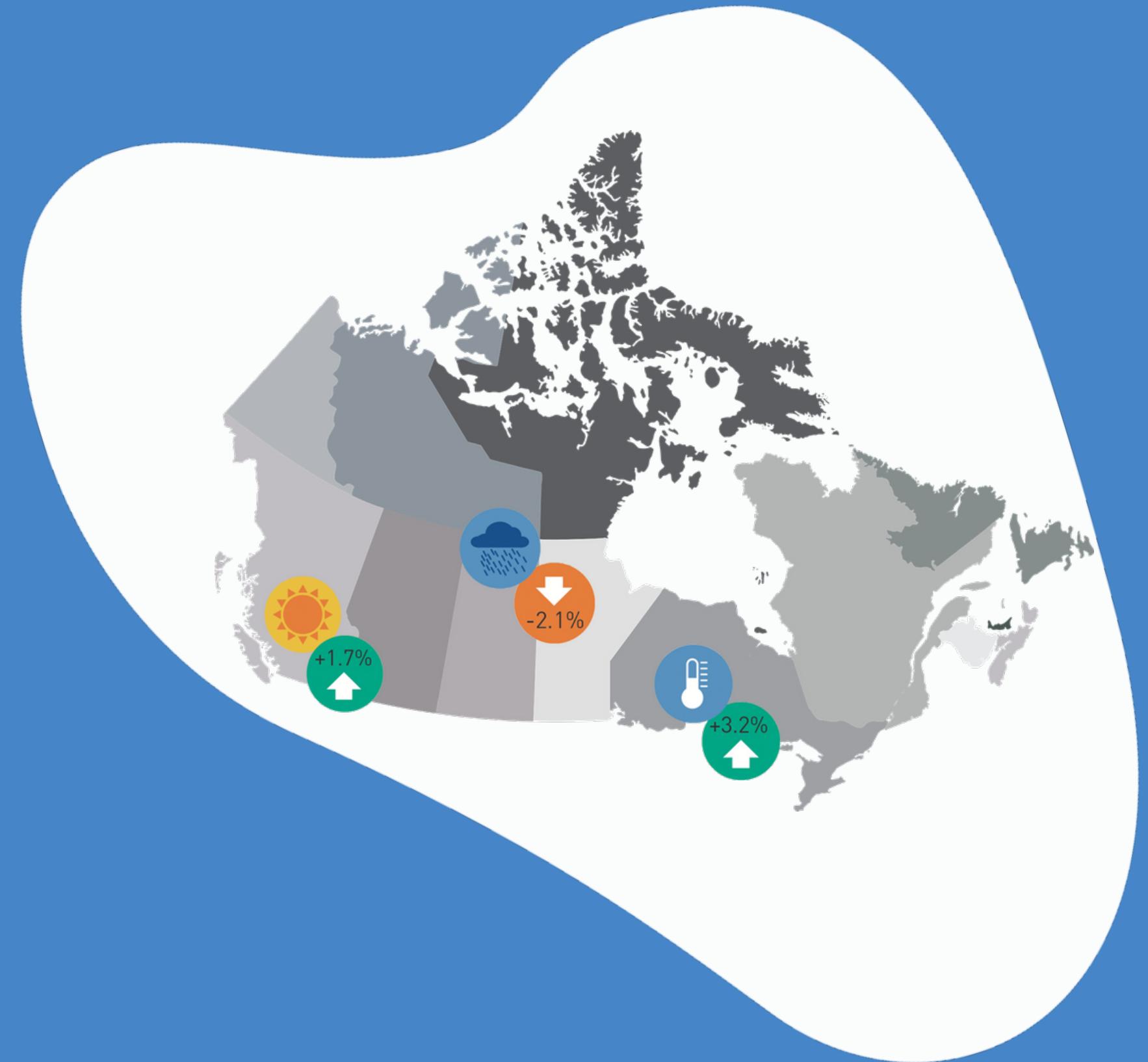
Know which product will be in demand and when.

Get results for each city

View predictions on different hierarchical levels be it city, or a particular department in a store.

Get accurate predictions

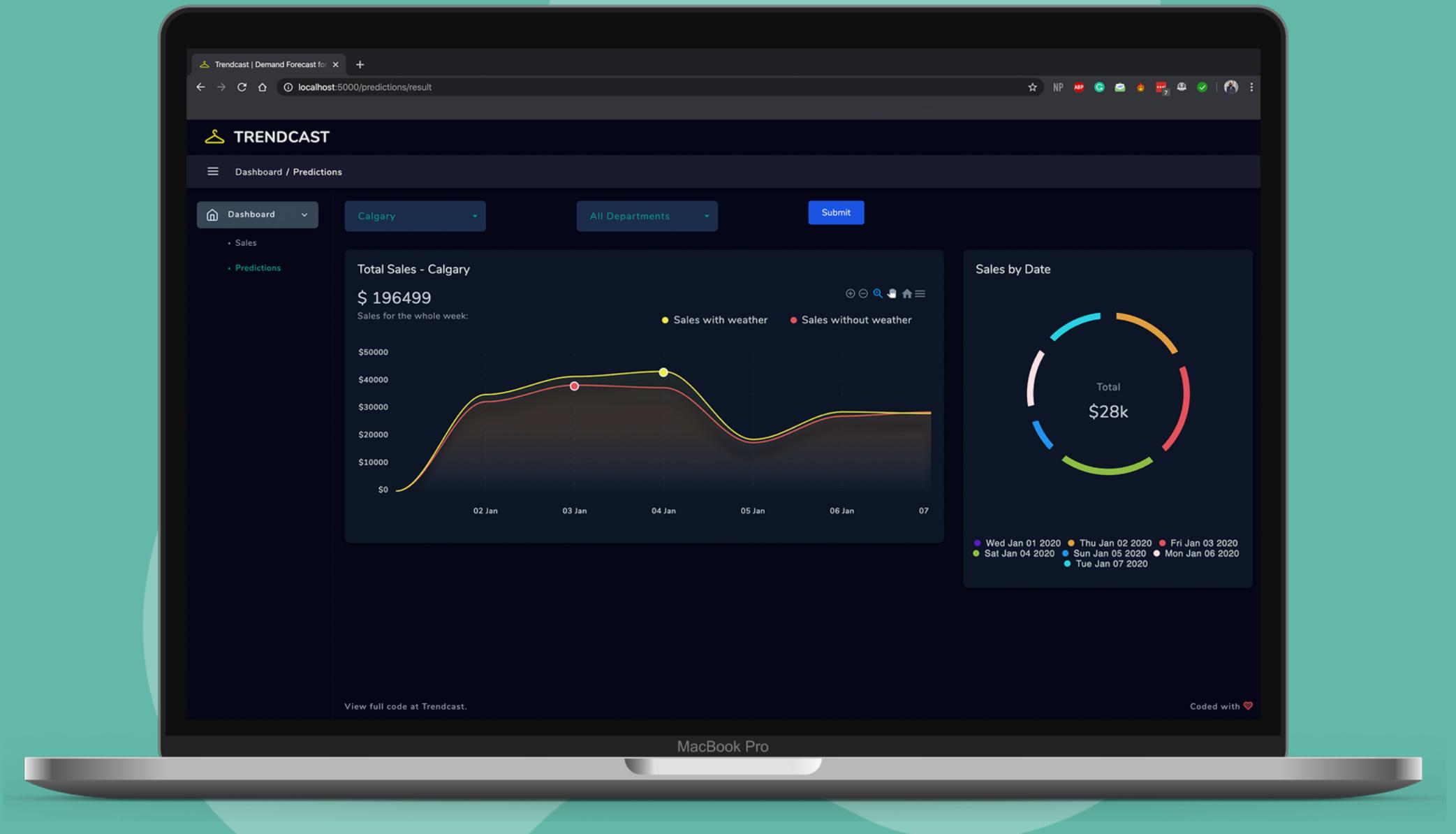
With our constantly evolving model, and weather predictions from Meteostat, get the most accurate predictions.



Dashboard

View your sales trend or your predictions in an interactive and easy to use app.

We help you make informed decisions to meet the upcoming demand and reduce stock-outs.



Workflow



Data Collection

Find AI
Meteostat API



ETL and EDA

Data Cleaning
Feature Engineering



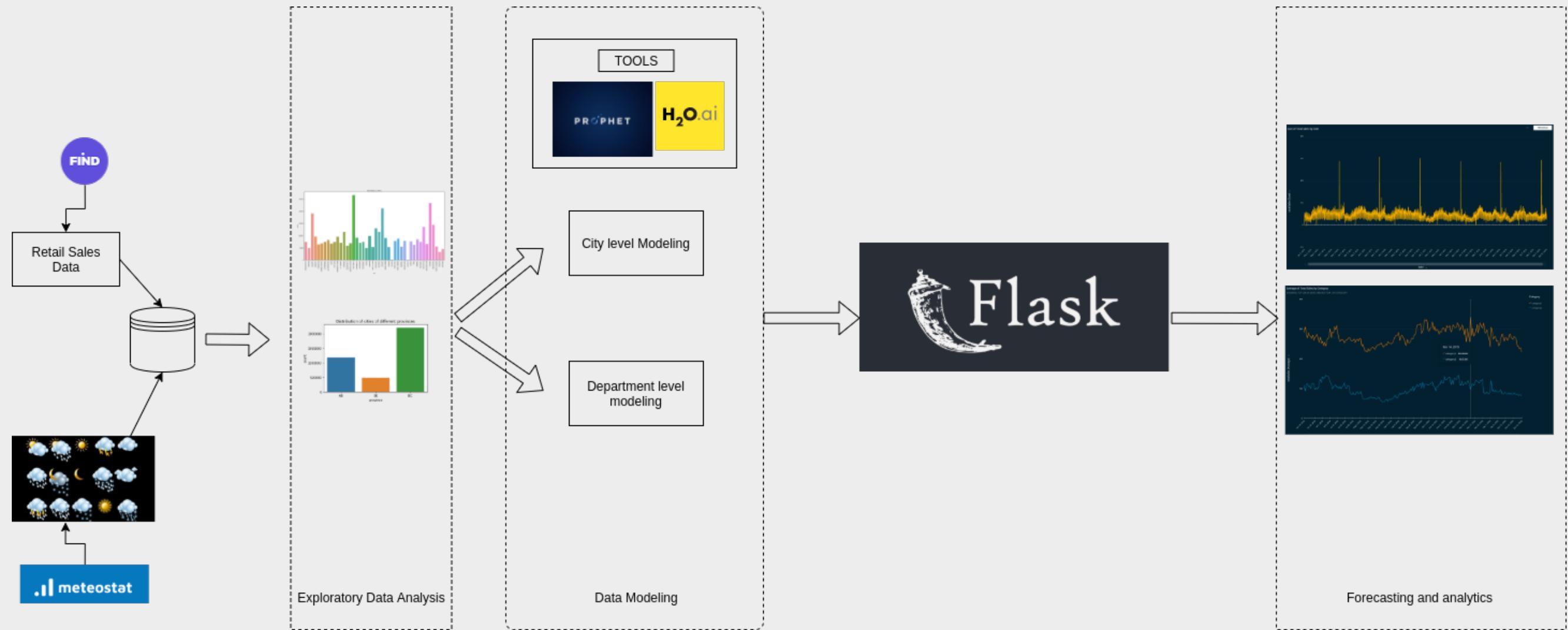
Data Modelling

AutoML - H2O.ai
FbProphet
XgBoost, LightGBM



Dashboard

Flask
ApexCharts.js



Results

Highly accurate results for the next week of predictions

Independent models for each city-department

- Accuracy increased significantly by generating separate models for each city-department combination
- Eliminates the issue of imbalanced data
- Compare the predictions with and without weather information present.



 Dashboard ▾ Calgary ▾

Submit

• Sales

• Predictions



The Team



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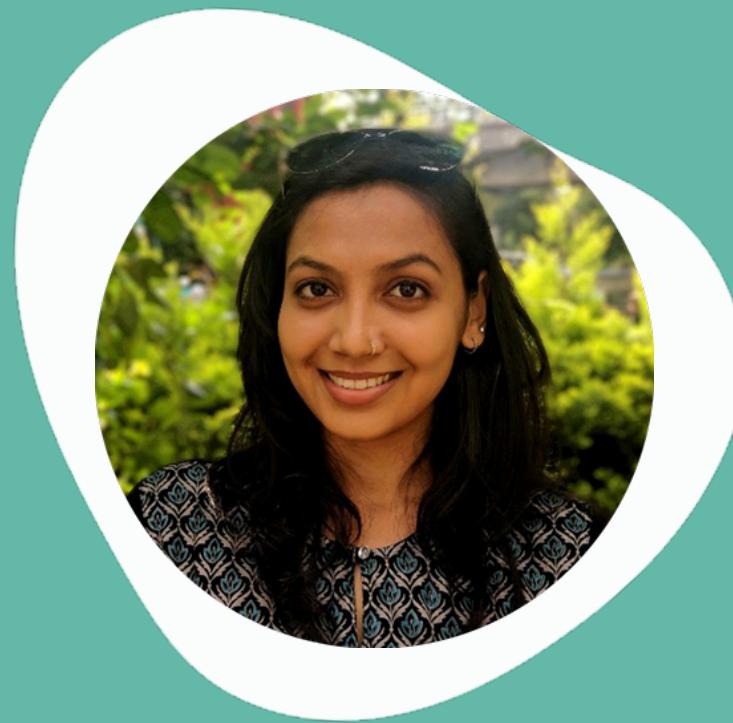
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