Churn Prediction Example

Objective:

To identify customers at high risk of churning.

- The model outputs a ranked list of customers with the likelihood of churning
- Help prioritize a list of customers for churn prevention
- Optimize ROI

Business Impact:

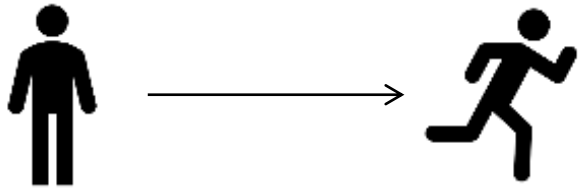
- Identified at-risk valuable customers contributing most revenue to the client
- Increased customer retention
- Increased customer satisfaction and loyalty

Churn Definition: Consider a customer as churner if they have had no (purchase) interaction for the last say 30 days.

Churn Prediction Example

Customer Data and Features

- Customer profiles consist of two types of data
  - Snapshot data (Monthly charges info)
  - Time series data (System usage info)



- Use 8 weeks of snapshot and time series data to build customer feature

- Label customers as churn or not churn in next 4 weeks

Snapshot data
- Offer type
- Tenure age
- Segmentation

Time series data
- Offer type
- Tenure age
- Segmentation

Churn Prediction Example

Feature Extraction from time series

Time series

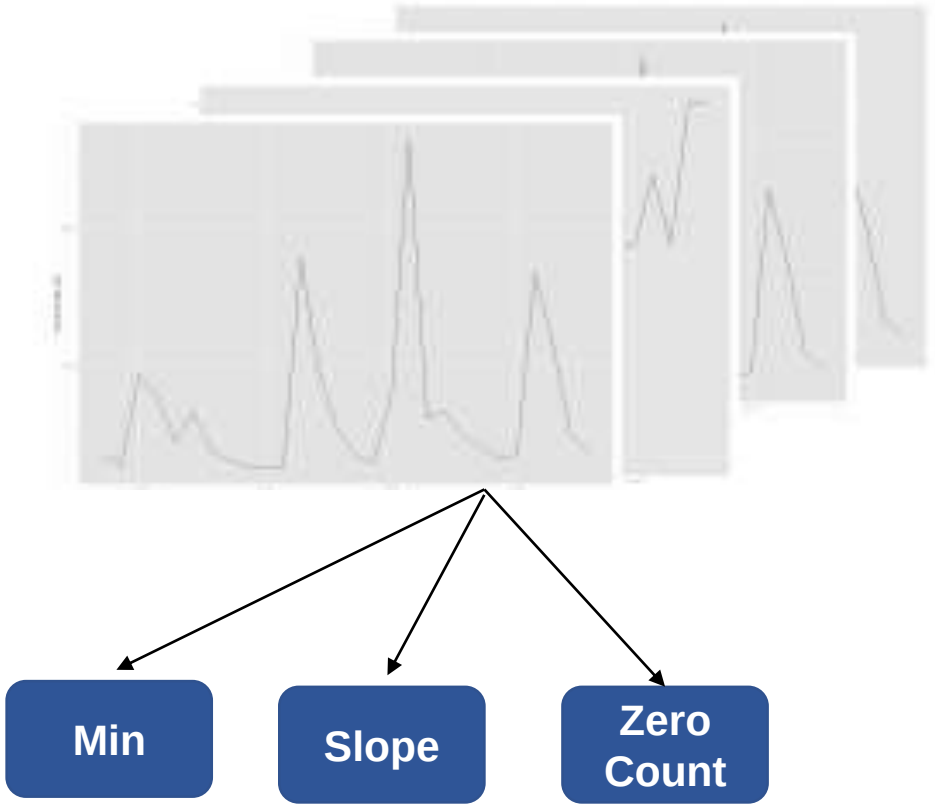
- Free usage
- Paid services

Extraction functions

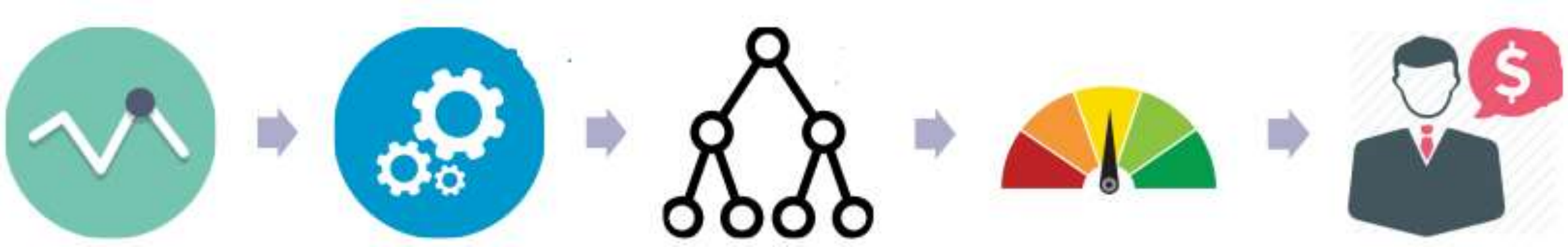
- Min Max Mean SD Median
- Number of zero values
- Slope
- Sum of last interval values

Extracted features

- Free Usage min.
- Total units max.
- …..



Our Approach for Churn Prediction



CUSTOMER DATA
- Time series usage
- Billing

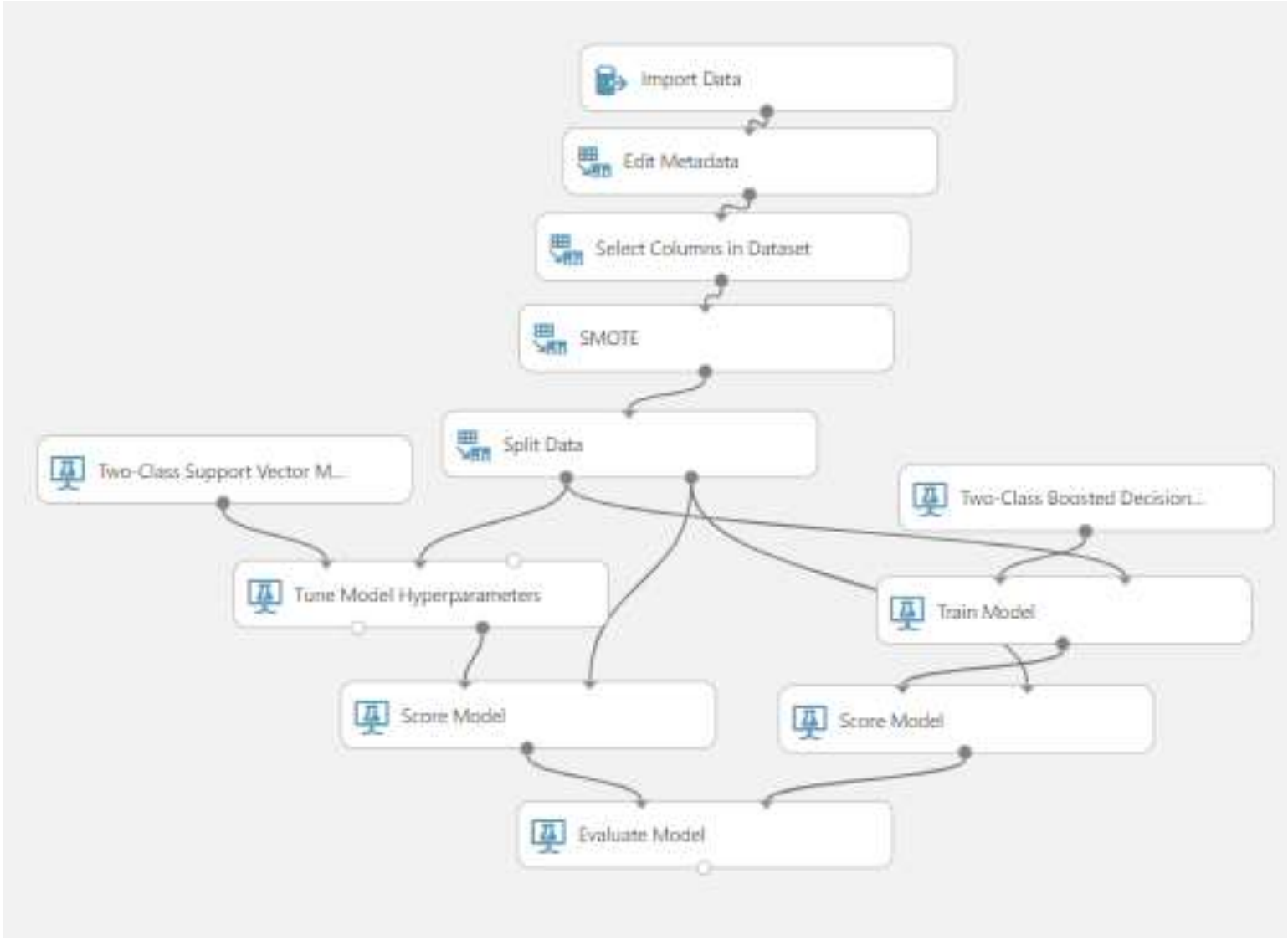
FEATURE ENGINEERING
- Extract features from time series
- Combine features

MODELING
- Two class boosted decision tree

CHURN RISK SCORES
- Weekly scores for all active customers

END USERS
- Take actions based on churn scores

Model



HR Analytics Example

Objective:

To predict employee churn risk across an organization

- Improve workforce planning
- Correlate different HR attributes like performance, compensation, experience to employee retention

Business Impact:

- Discover underlying reasons for employee attrition and reduce voluntary attrition by taking corrective action
- Increase employee satisfaction by identifying and analyzing key churn parameters.

Model