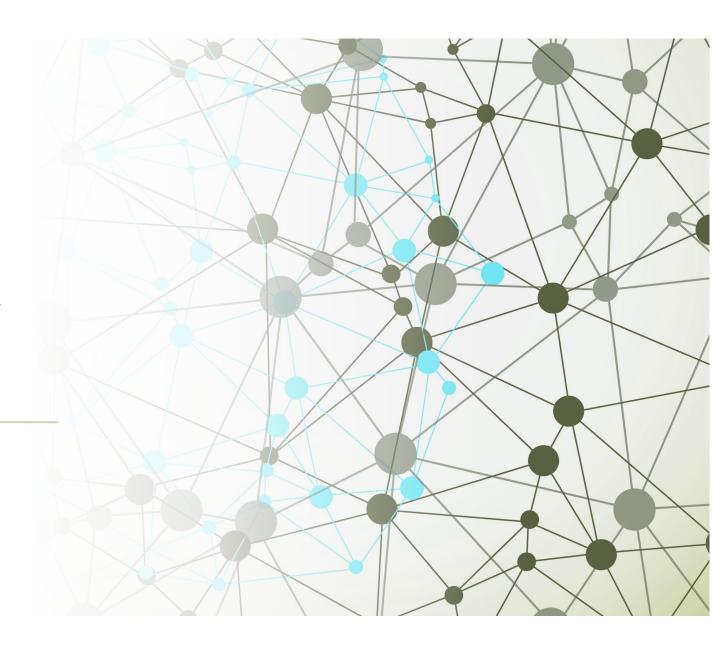# Deposit Propensity Prediction

Background – A Regional Bank in OK and TX

- Founded in 1900

- >350,000 customers

- 75 locations in OK and TX

- Asset Size: $16 billion

- Cross functional Teams: Marketing, Retail Banking, Analytics Solutions

- Objective

  - Cross-sell deposit products to mortgage customers

  - Mine mortgage application data

  - Identify customers with high deposit potential

Details

- Data Source: Mortgage Application Data in SQL Server, Snowflake
- Technical Skills:
  - Extracting Data: T-SQL, Snowflake SQL
  - Manipulating Data and Modeling: Python
  - Machine Learning Models: GBM, Random Forest, Light GBM, Grid Search, Hyperparameter Tuning
  - Output: Snowflake SQL, Power BI
- Soft Skills:
  - Communication
  - Project Management
  - Cross-functional Coordination

Process

Planning
Define project goals and scope with Marketing and Retail Banking

→

Data Extraction
From sql server and Snowflake

→

Data Preparation
Clean and manipulate data using python and sql

↓

Output – Power BI
Create a call list, share with Retail Banking

←

Model Application
Apply the model to those customers without deposit products, predict potential deposits.

←

Modeling
Use customers with deposit products to train machine learning model

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Outreach
Bankers reach out to customers with high deposit propensity. Use a special promo code for tracking.

→

Monitoring
Track the result of phone calls using the promo code in Salesforce. Track model performance using python

→

Result: $1.5 Million of New Deposit in the first 3 months.