Midterm Presentation • Cloud Computing (DATS 6450)

Cloud-based Bank Customer Churn Prediction System

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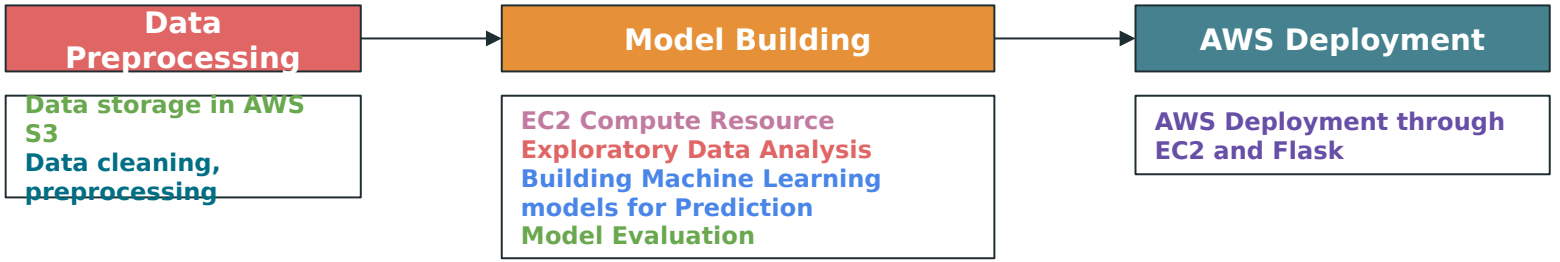
Introduction

- **Context**: The banking industry is highly competitive, and customer churn can greatly affect profitability. Predicting whether a customer will leave the bank can help in retaining customers and enhancing services.

- **Objective**: This project aims to predict if a customer will leave the bank by analyzing various factors such as their credit score, account balance, and other features using a U.S. bank dataset.

Project Definition

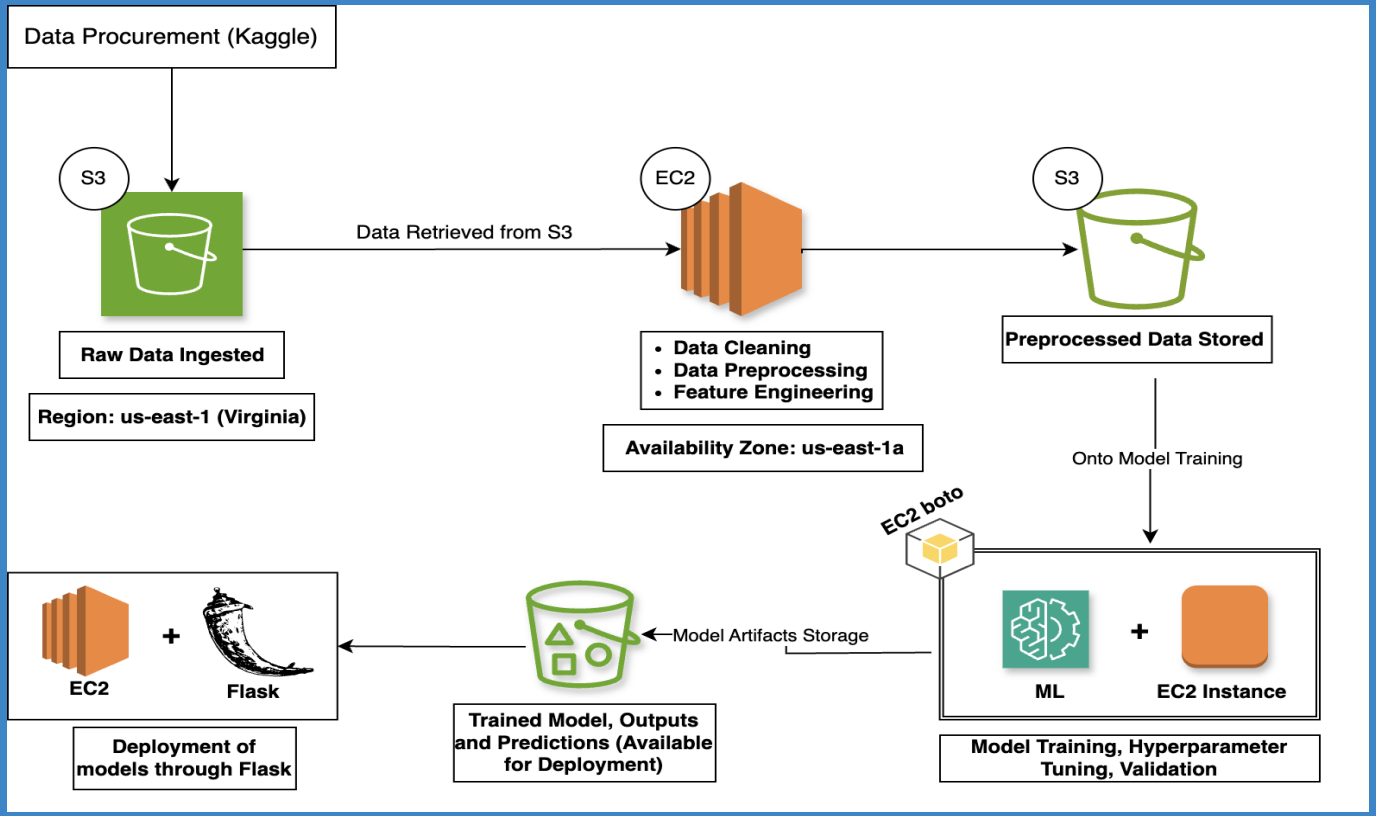
Scope: Build a predictive model to identify customers who are likely to churn based on historical data from a U.S. bank.



Expected Outcomes:

- A fully trained and deployed model to predict customer churn.
- Visual insights into important factors influencing churn.
- A demo of model predictions.

AWS Project Architecture



Conclusion

Through this project we aim to:

- Develop and deploy a customer churn prediction model using **AWS services** (**EC2** for computation, **S3** for data storage).
- Achieve a scalable workflow for data preprocessing, model building, and deployment through EC2 and **Flask** integration.
- Deliver key outcomes: accurate **churn predictions**, insights into churn factors, and a fully functional model demo.