TEAM 07

STOCK MARKET ANALYSIS USING AWS

TEAM MEMBERS

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INTRODUCTION

- The stock market is highly volatile and requires robust data processing for accurate insights.
- Cloud computing enables scalable and efficient analysis of large financial datasets.
- AWS (Amazon Web Services) provides powerful tools for real-time data streaming, storage, and machine learning.
- This project leverages AWS services to analyze stock market trends, predict price movements, and visualize key insights.

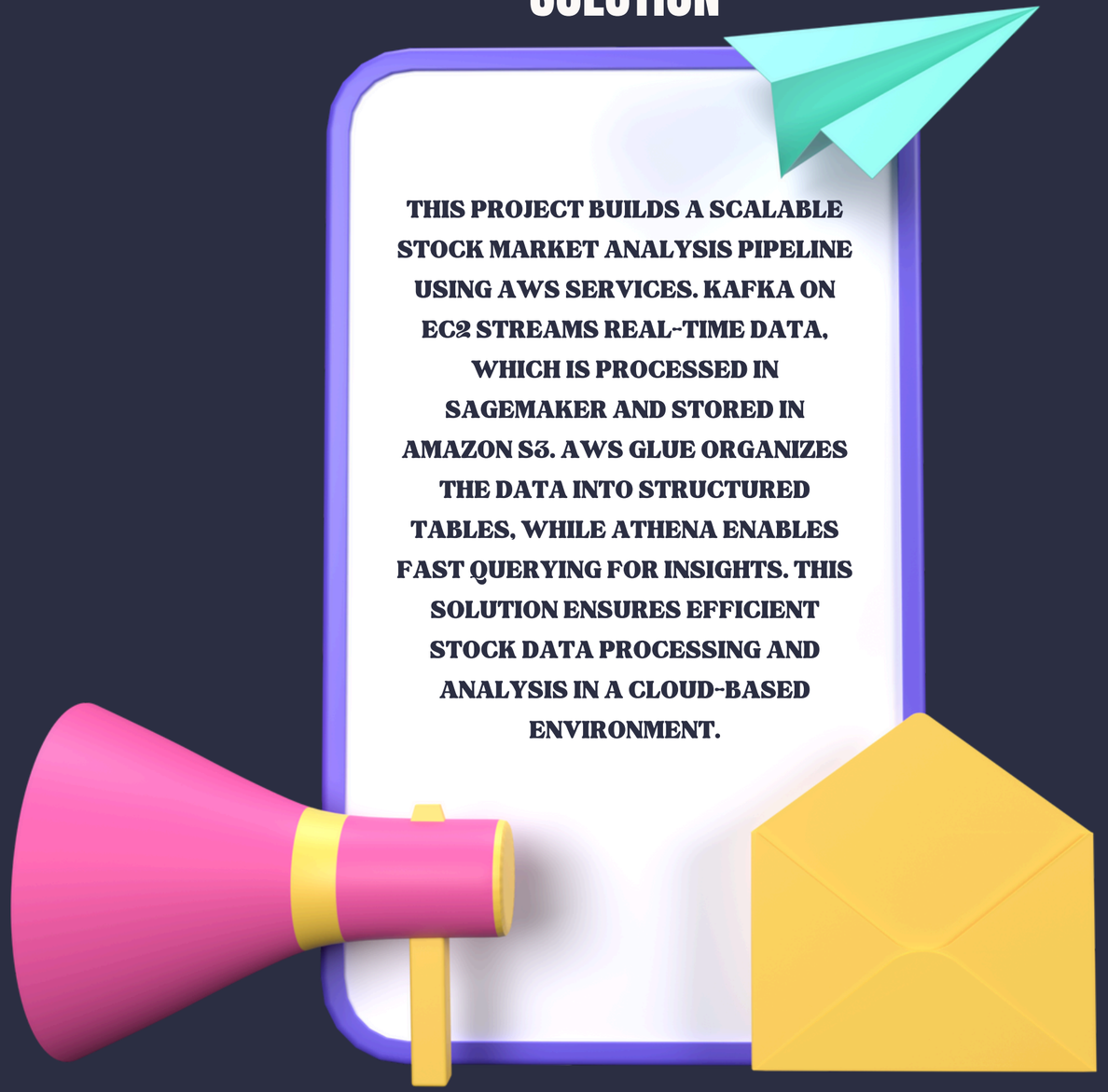
PROBLEM STATEMENT

REAL-TIME STOCK DATA IS HARD TO PROCESS WITH TRADITIONAL METHODS.

KAFKA ON EC2 STREAMS DATA; SAGEMAKER PROCESSES IT; S3 STORES IT.

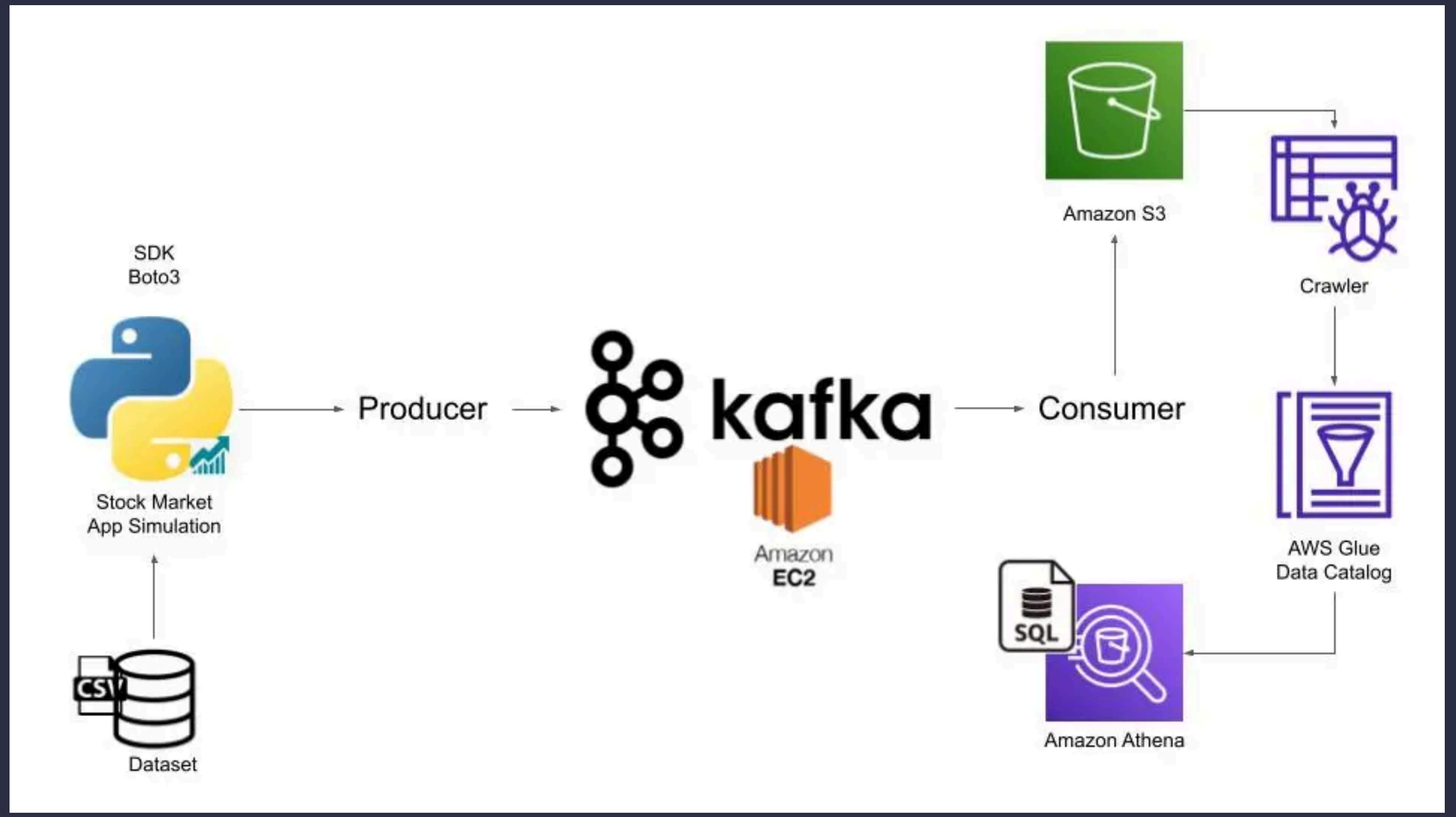
GLUE & ATHENA ENABLE FAST QUERYING FOR INSIGHTS.

PROPOSED SOLUTION



THIS PROJECT BUILDS A SCALABLE STOCK MARKET ANALYSIS PIPELINE USING AWS SERVICES. KAFKA ON EC2 STREAMS REAL-TIME DATA, WHICH IS PROCESSED IN SAGEMAKER AND STORED IN AMAZON S3. AWS GLUE ORGANIZES THE DATA INTO STRUCTURED TABLES, WHILE ATHENA ENABLES FAST QUERYING FOR INSIGHTS. THIS SOLUTION ENSURES EFFICIENT STOCK DATA PROCESSING AND ANALYSIS IN A CLOUD-BASED ENVIRONMENT.

ARCHITECTURE



PROJECT TIMELINE

02/15/2025
Data Extraction

02/22/2025
Data Transformation

02/28/2025
Data Loading

03/12/2025
Secure Storage

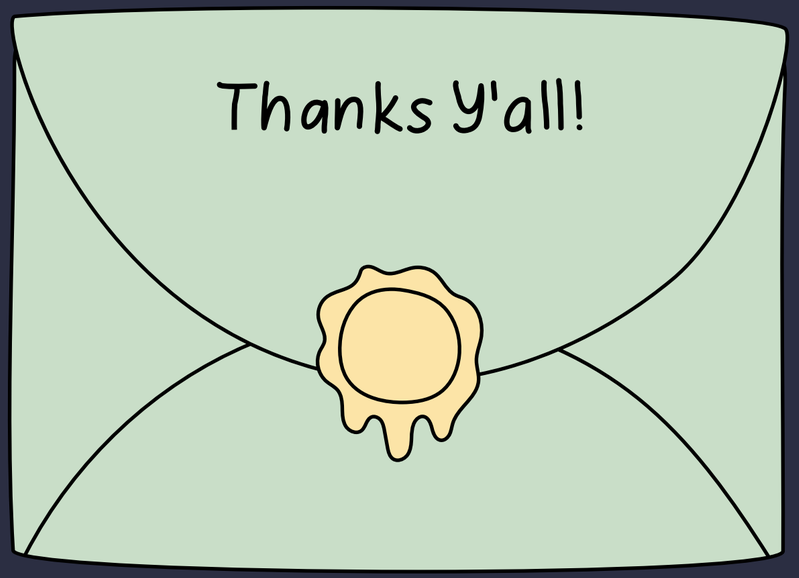
03/19/2025
Monitoring

04/02/2025
Data Visualization

04/23/2025
Data Analysis

GITHUB LINK

HTTPS://GITHUB.COM/VARUNGAZALA16/DSCI-6007-03-AWS-PROJECT


Thanks Y'all!