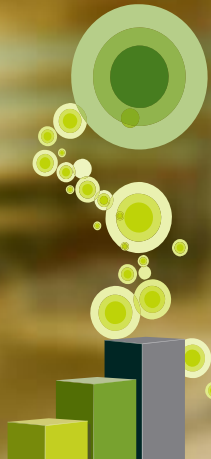# Machine Learning Project

Payment Forecasting of Etisalat Customers in Year 2022

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Outline

- Objective
- Introduction
- Architecture / Workflow
- Results & Outcomes
- Future Work
- Conclusion

Objective

- Apply machine learning techniques to a real work problem

- Forecasting the consumer payments for year 2022

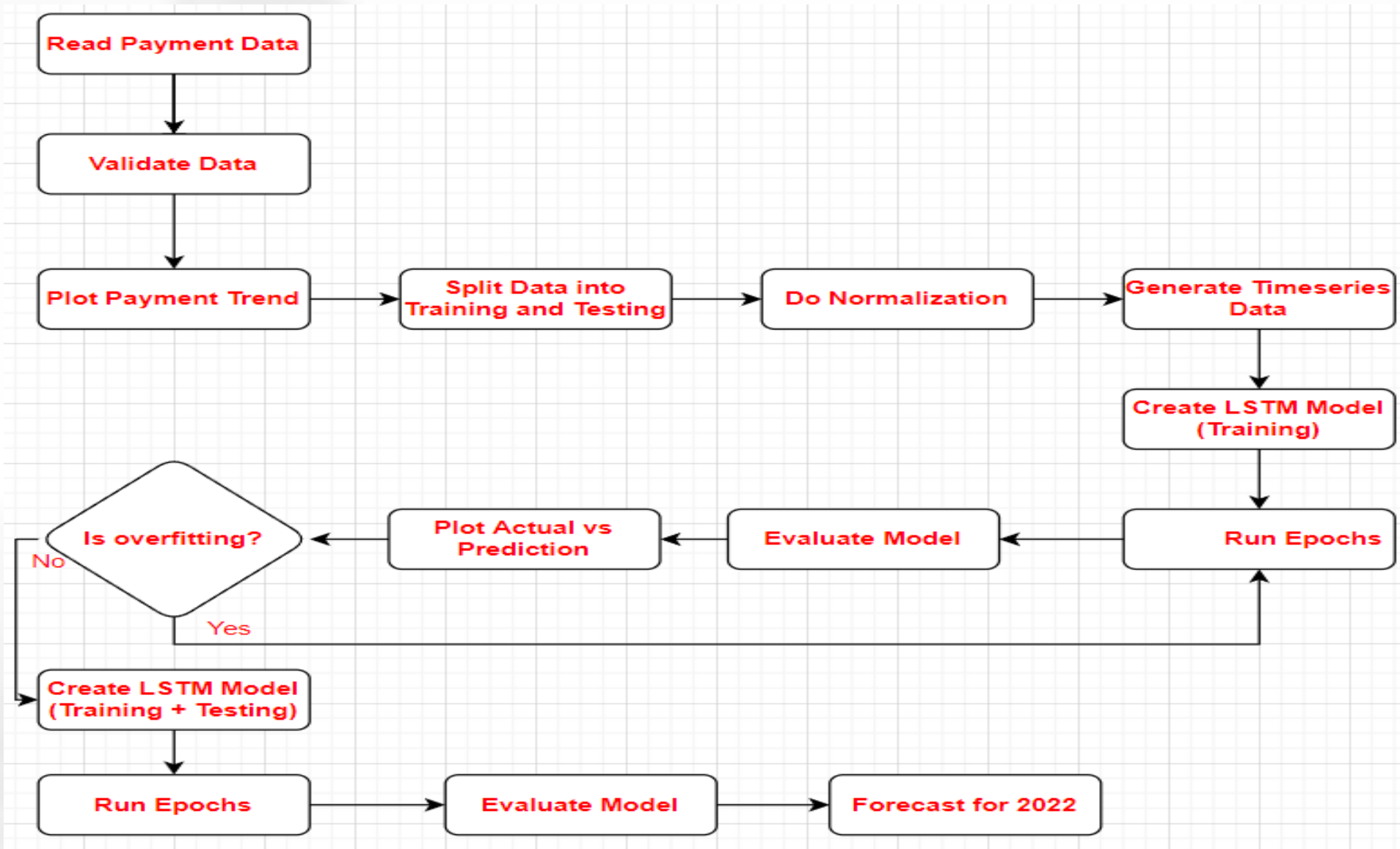- Recommend changes in the infrastructure of payment system

Introduction

- Etisalat payment system.

- Machine learning.

  - Supervised learning

  - Unsupervised learning

- Time series sequential model

Architecture / Workflow

Results & Outcomes
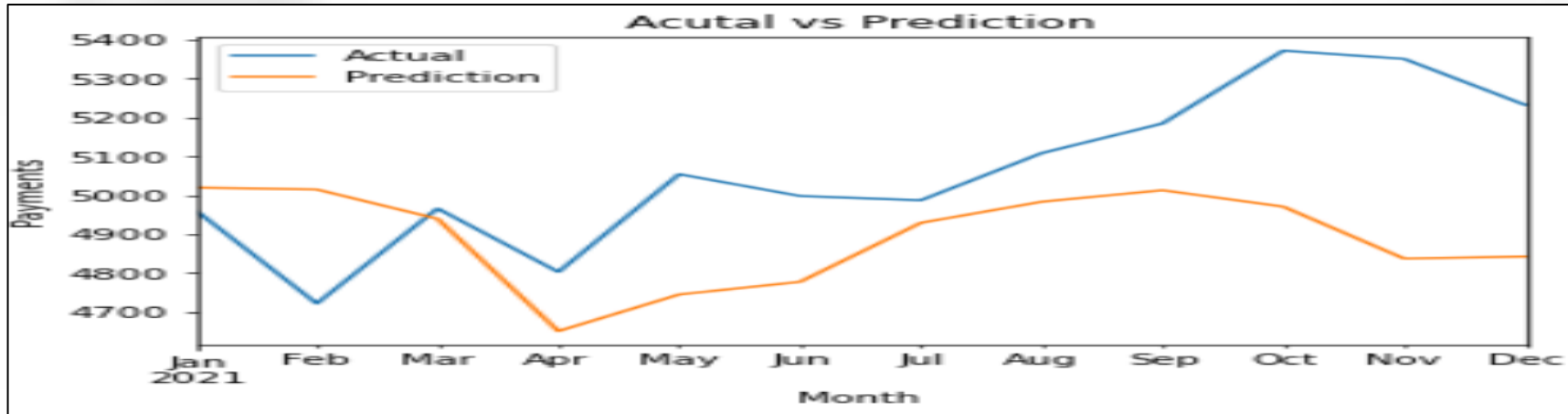
- Payment Trend in Last 10 Years (in units of 1000)

- Payment Inflow in 2021 (Actual)

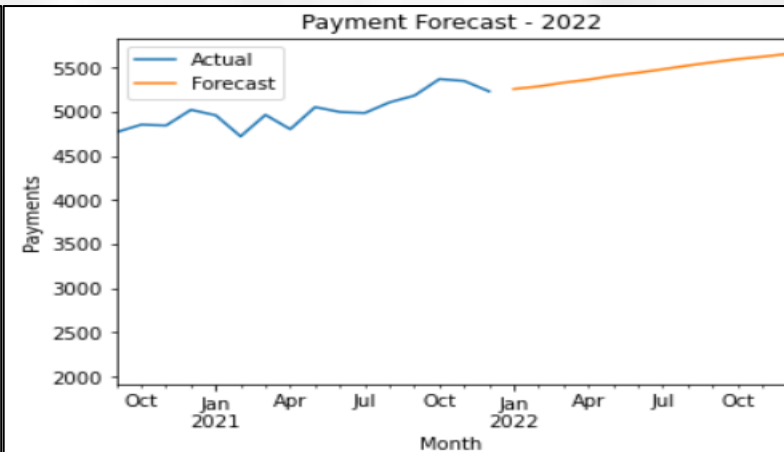| Description	Average Payments (Counts)
Total payments in 2021	60,000,0000
Monthly payments	5,000,000
Daily payments	170,000

Results & Outcomes Cont...

- Payment Trend Actual vs Predicted for Year 2021

- Payment Prediction for Year 2022

Description	Average Payments (Counts)
Additional Monthly payments	5,000,000
Additional Daily payments	17,000

Future Work

- The model is extendable to the enterprise customer

Conclusion

- IT Infrastructure Details of Payment System.

WebLogic Servers	No of servers = 4	No of clusters/instances = 16 (=4*4)
Oracle Database Server	Physical Memory = 273 GB with 40% of current utilization	

- Current throughput of each instance is 11,000 per day in 2021

- Predicted throughput of each instance is 12,100 per day in 2022 (10% ⬆)

- Recommendation
  - 1 WL server (4 clusters) by end of 2022
  - Increase the physical memory of Oracle database by 10% (7-10 GB) by end of year 2022

THANK YOU