Report by: Lavannya Rautal

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| Internship Project Title | RIO-125: Forecasting System - Project Demand of Products at a Retail Outlet Based on Historical Data Batch 01 |
| Name of the Company | TCS |
| Name of the Industry Mentor | Shree Katayani |
| Name of the Institute | Vishwakarma University |

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**Acknowledgements**

I would like to express my gratitude to my mentors and advisors for their invaluable support and guidance during the initial phase of this internship project. Their insights have been instrumental in shaping the project's direction.

**Objective**

The primary objective of this internship is to develop a Forecasting System for product demand based on historical data. This interim report outlines the progress made during the initial five days of the project.

**Introduction / Description of Internship**

The internship, in collaboration with Tata Consultancy Services (TCS), focuses on building a predictive model for product demand forecasting. The project involves data collection, preprocessing, model implementation, hyperparameter tuning, and evaluation.

**Internship Activities**

**Approach / Methodology**

The initial days were dedicated to project setup, including configuring development tools, creating a GitHub repository for version control, and establishing a structured workflow.

**Assumptions**

We assume that historical sales data represents future sales patterns and that the selected Exponential Smoothing algorithm is suitable for the dataset.

**Exceptions / Exclusions**

Real-time data integration and external factors are not within the project's current scope.

**Charts, Table, Diagrams**

No charts, tables, or diagrams have been generated at this stage. Visual aids will be incorporated as the project progresses.

**Algorithms**

The Exponential Smoothing algorithm has been selected for demand forecasting. Initial research and preparations have begun for its implementation.

**Challenges & Opportunities**

**Challenges Faced**

The primary challenge has been configuring the project environment and managing data collection efficiently.

**Opportunities**

Successful project setup lays the foundation for efficient development, while data collection is a critical step toward model implementation.

**Risk Vs Reward**

**Risk**

The risk lies in potential delays due to project setup complexities.

**Reward**

Efficient setup ensures smooth project execution, ultimately leading to accurate demand forecasting.

**Reflections on the Internship**

The initial phase of the internship has been a learning experience in setting up a project environment and defining its scope. It emphasizes the importance of meticulous planning.

**Recommendations**

* Continue with the structured project setup and dataset collection.
* Keep a close eye on potential challenges and address them proactively.

**Outcome / Conclusion**

The initial five days have been dedicated to project setup and preparations. The project is on track, with the foundation laid for data preprocessing, model development, and evaluation in the upcoming phases.

**Enhancement Scope**

Future work will involve model implementation, hyperparameter tuning, and performance evaluation.