INTERNSHIP: STUDENT DAILY REPORT

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| Name of the Student | Vivek kumar Shriwas |
| Internship Project Topic | TCS iON RIO-125: Forecasting System - Project Demand of Products at a Retail Outlet Based on Historical Data |
| Name of the Organization | TCS iON |
| Name of the Industry Mentor | Sreekathiayini Ruthraiyah |
| Name of the Institute | Viswakarma University |

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| Date | Day | Hours Spent |
| 10/08/2023 | Day 24 | 3 hours and 45 minutes |
| Description:  **Self-learning Duration : 3 hours**  **Activity Report Duration : 45 minutes**  **Activities:**   1. **Fine-Tuning Prophet Parameters (1 hour):**    * Delved deeper into the Prophet forecasting technique by exploring its various hyperparameters.    * Adjusted parameters such as seasonality settings, holidays, and growth options to optimize the forecast.    * Ran multiple iterations with different settings to observe the effects on forecast accuracy. 2. **Comparing Forecast Accuracy Metrics (1 hour):**    * Dedicated time to assess the accuracy of the Prophet forecasts quantitatively.    * Calculated common metrics like Mean Absolute Error (MAE), Mean Squared Error (MSE), and Root Mean Squared Error (RMSE).    * Compared these metrics to those obtained from the LSTM model to determine which method performed better. 3. **Visualizing Prophet Forecasts (1 hour):**    * Created visualizations to display the Prophet-generated forecasts alongside the actual dataset.    * Plotted the forecasted values with appropriate confidence intervals.    * Noted any discrepancies or alignments between the forecasted trends and the actual data. 4. **Refining Documentation (45 minutes):**    * Continued working on the documentation section related to the Prophet implementation.    * Added detailed explanations of the tuned parameters and their effects on the forecasts.    * Included visual aids, such as graphs, to enhance the clarity of the documentation.   **Challenges:** Fine-tuning Prophet parameters demanded careful consideration, as each setting could significantly impact the quality of the forecasts. Additionally, accurately comparing forecast accuracy between Prophet and LSTM required a thorough understanding of the metrics and their implications for each model. | | |