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 |
| 9/08/2023 | Day 23 | 3 hours and 45 minutes |
| Description:  **Self-learning Duration : 3 hours**  **Activity Report Duration : 45 minutes**  **Activities:**   1. **Exploring Advanced Time Series Techniques (1 hour):**    * Dedicated time to research more advanced techniques for time series forecasting.    * Explored methods like Prophet, a forecasting tool developed by Facebook's Core Data Science team.    * Investigated the applicability of these techniques to the project's dataset and requirements. 2. **Implementing Facebook Prophet (1 hour):**    * Following the research, attempted to implement the Prophet forecasting technique.    * Installed necessary libraries and set up the initial configuration.    * Ran a preliminary forecast using the provided dataset to observe the results. 3. **Comparative Analysis with LSTM (1 hour):**    * Conducted a comparative analysis between the LSTM model and the Prophet technique.    * Evaluated the strengths and weaknesses of each approach in capturing the dataset's patterns.    * Noted differences in model complexity, interpretability, and ease of use. 4. **Documenting Prophet Implementation (45 minutes):**    * Created a documentation section outlining the steps taken to implement Prophet.    * Recorded challenges faced during installation and configuration.    * Included initial insights into the forecasted results and how they compared with the LSTM model.   **Challenges:** Implementing Prophet required familiarity with its unique syntax and configuration settings. Additionally, adapting the new technique to the project's dataset and understanding its forecasting mechanics presented challenges. Comparing Prophet with the LSTM model necessitated a thorough evaluation of their respective pros and cons. | | |