**RP-TUMBA COLLEGE**

**STUDENT’S CAPSTONE PROJECT PROGRESS TRACKER 2024-2025**

**ParkFinder Navigator (Forecasting & Optimization)**

Student name(s): **SHUMBUSHO Jean Baptiste**

Registration number: **24RP08552**

Department: **IT**

Program: **ICT**

Supervisor: **MANIRAGUHA Muhamad**

Co-Supervisor(s): **NIYONSABA Vedaste**

**PROGRESS TRACKER FOR May:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Task** | **Start Date** | **End Date** | **Description** |
| 5 | Integrate chatbot with FastAPI backend | 01/05/2025 | 05/05/2025 | Build a multilingual chatbot interface using FastAPI, enabling user interaction and response generation from trained LLM models. |
| 6 | Link chatbot responses to database records | 06/05/2025 | 08/05/2025 | Establish relations between chatbot queries and the parking data stored in MySQL. Use semantic search and relevant joins. |
| 7 | Design and test RESTful API endpoints | 09/05/2025 | 12/05/2025 | Create and test FastAPI endpoints for querying parking availability, booking slots, and logging user interactions. |
| 8 | Optimize database relations for chatbot usage | 13/05/2025 | 17/05/2025 | Redesign database schema to support efficient access, normalization, and integration with the chatbot system. |
| 9 | Implement logging and monitoring system | 18/05/2025 | 21/05/2025 | Add request/response logging, error tracking, and performance monitoring for chatbot and API calls. |
| 10 | Conduct user testing and feedback collection | 22/05/2025 | 25/05/2025 | Test chatbot, booking, model accuracy performance with real users, gather feedback, and improve based on usability and database query relevance. |