Week 1: Project Charter Development (March 25-29, 2025)

During this week, I focused primarily on developing the Project Charter for our ML-based device lifespan prediction web application. I successfully defined the project scope, objectives, and deliverables through collaborative sessions with team members.

I established a comprehensive structure for the project, breaking it down into five core functional modules: Device Center, Monitoring Center, Data Simulation, Alert System, and Reporting System. For each module, I outlined key features, dependencies, and implementation priorities.

The Project Charter documentation included stakeholder identification, preliminary resource allocation, initial risk assessment, and a baseline project schedule. I also established key performance indicators to measure project success and created a communication plan to ensure effective information flow.

Time spent on Project Charter Development: **10 hours**

Week 2: Risk Management & System Architecture (March 30-April 5, 2025)

This week was divided between developing the Risk Management Plan and creating the System Architecture Design:

Risk Management Plan (March 30-April 5)

I conducted a thorough risk assessment for our project, identifying potential technical, operational, and resource-related risks. For each identified risk, I evaluated both probability and impact, creating a risk prioritization matrix.

I developed specific mitigation strategies for high-priority risks, focusing particularly on challenges related to machine learning model accuracy, data quality issues, and integration complications. The plan includes risk monitoring protocols and contingency plans for critical risks.

Time spent on Risk Management Plan: **7 hours**

System Architecture Design (April 2-3)

I designed the system architecture for our application, establishing a three-tier structure that includes:

- **Presentation layer (frontend web interface)**
- **Application layer (business logic and ML components)**
- **Data layer (database structure and storage mechanisms)**

I defined the technology stack, selecting appropriate frameworks and libraries for both frontend and backend development. The architecture accommodates all five main functional modules while ensuring scalability and maintainability.

Time spent on System Architecture Design: **5 hours**