

**Bi-Weekly Report (Date Range: 6<sup>th</sup> April– 19<sup>th</sup> April)**

**Internship Project:** Smart Shopping Assistant

**Tech Stack:** FastAPI, Streamlit, Machine Learning, PostgreSQL

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## Work Completed:

- **Project Setup:**
    - Initialized the project structure and created a modular directory layout for scalability and clean code practices.
    - Configured environment setup and ready for version control initialization.
  - **Authentication Integration:**
    - Implemented OAuth2-based login flow to securely authenticate users.
    - Basic user session management established to support future personalization and recommendation features.
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## Challenges & Constraints:

- Faced some personal challenges due to **mid-semester exams** and **health issues**, which impacted the pace of development during this period.
  - Despite limited progress, core foundational elements like authentication and project scaffolding are in place to accelerate development in the upcoming weeks.
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## Planned Work:

- **Database Integration:** Connect and model the user/item databases to begin capturing behaviour and preferences.
  - **Start Basic Recommendation Logic:** Implement a basic collaborative or content-based filtering system to test the pipeline.
  - **User Interface Integration:** Begin sketching or prototyping how recommendations will be presented to the client.
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## Reflections / Notes:

- The focus was on laying a solid foundation to ensure a scalable and modular codebase.
- With mid-sems and health issues behind me, I am aiming to pick up and manage for lost time in the following weeks and complete my work within deadline.