02  
 PLANNING

2.1 Project Planning

A detailed **schedule with milestones** has been defined, ensuring that the development process is structured, manageable, and aligned with the semester timeline.

CAT1: Project Planning Phase (Feb 19 - Mar 04)

| **Task ID** | **Task Description** | **Week** | **Linked** | **Status** |
| --- | --- | --- | --- | --- |
| 1.1 | * **Define project scope, research open datasets, and identify visualization requirements.** * **Define technology stack, assess integration challenges, and create a detailed timeline.** | Feb 19 - Feb 23 | - | Done |
| 1.3 | **Document sustainability considerations, set up development environment, and compile CAT1 documentation.** | Feb 24 - Mar 02 | 1.1 | Done |
| 1.4 | **Review and finalize CAT1 documentation.** | Mar 02 - Mar 03 | 1.1, 1.2 | Done |

Table 2. 1: Project Planning Phase

CAT2: Design Phase (Mar 05 - Apr 01)

| **Task ID** | **Task Description** | **Week** | **Linked** | **Status** |
| --- | --- | --- | --- | --- |
| 2.1 | **Define user stories, database schema, and UI wireframes for the mapping interface.** | Mar 03 - Mar 09 | 1.10 | Done |
| 2.2 | **Design system architecture, research filtering algorithms, and create frontend class diagrams.** | Mar 10 - Mar 16 | 2.1 | Done |
| 2.3 | **Develop API endpoints, implement login screen, and document state of the art in geospatial data visualization.** | Mar 17 - Mar 23 | 2.1 | Done |
| 2.4 | **Compile and review CAT2 documentation.** | Mar 23 - Mar 31 | 2.1 - 2.3 | Done |

Table 2. : Design Phase

CAT3: Implementation Phase (Apr 02 - May 06)

| **Task ID** | **Task Description** | **Week** | **Linked** | **Status** |
| --- | --- | --- | --- | --- |
| 3.1 | **Set up backend database and implement data ingestion pipelines for open data.** | Apr 01 - Apr 06 | - | To Do |
| 3.2 | **Develop backend services, authentication, and frontend components for map visualization.** | Apr 07 - Apr 13 | 3.1 | To Do |
| 3.3 | **Implement filtering, integrate Leaflet.js, and develop data visualization components.** | Apr 14 - Apr 20 | 3.2 | To Do |
| 3.4 | **Conduct unit testing, perform integration testing, and deploy prototype.** | Apr 21 - Apr 27 | 3.3, 3.4 | To Do |
| 3.5 | **Compile implementation documentation and finalize CAT3 documentation.** | Apr 27 - May 05 | 3.1-3.4 | To Do |

Table 2. : Implementation Phase

CAT4: Final Product & Report (May 07 - Jun 03)

| **Task ID** | **Task Description** | **Week** | **Linked** | **Status** |
| --- | --- | --- | --- | --- |
| 4.1 | **Refine UI based on testing feedback.** | May 07 - May 11 | 3.14 | To Do |
| 4.2 | **Implement advanced filtering, economic activity visualization, and optimize database queries.** | May 12 - May 18 | 4.1 | To Do |
| 4.3 | **Implement (optional) NLP capabilities and conduct comprehensive system testing.** | May 19 - May 25 | 4.1 | To Do |
| 4.4 | **Fix bugs, optimize performance, and prepare final deployment package. Create user documentation, write results and analysis, draft conclusions, and compile bibliography.** | May 26 - Jun 01 | 4.1 | To Do |
| 4.5 | **Finalize and format the project report, then submit CAT4.** | Jun 01 - Jun 03 | 4.1-4.4 | To Do |

Table 2. 4: final Product and Report

CAT5: Presentation Preparation (Jun 04 - Jun 10)

| **Task ID** | **Task Description** | **Week** | **Linked** | **Status** |
| --- | --- | --- | --- | --- |
| 5.1 | * **Create presentation outline, storyboard, and design slides.** * **Prepare demonstration script, record key platform features, and create a narrated presentation video.** | Jun 04 - Jun 08 | 4.14 | To Do |
| 5.2 | **Review, finalize, and refine presentation based on feedback.** | Jun 08 - Jun 09 | 5.1 | To Do |

Table 2. : Presentation Preparation Phase

Defence Preparation (Jun 11 - Jun 17)

| **Task ID** | **Task Description** | **Week** | **Linked** | **Status** |
| --- | --- | --- | --- | --- |
| 6.1 | * **Prepare defence presentation based on feedback.** * **Anticipate potential questions and prepare responses.** * **Practice presentation delivery** | Jun 11-Jun16 | 5.2 | To Do |
| 6.2 | **Final defence presentation** | Jun 17 | 6.1 | To Do |

Table 2. : Defence Preparation Phase

Ongoing Tasks Throughout the Project

| **Task ID** | **Task Description** | **Week** | **Linked** | **Status** |
| --- | --- | --- | --- | --- |
| 7.1 | **Gant Planning updates** | Feb 19 - Jun 17 | - | Ongoing |
| 7.2 | **Weekly supervisor check-ins** | Feb 19 - Jun 17 | - | Ongoing |
| 7.3 | **Documentation updates** | Feb 19 - Jun 03 | - | Ongoing |

Table 2. : Ongoing Tasks Throughout the Project