# Project Planning & Scheduling – Executing the Vision

## 🗓️ Project Timeline Overview

To ensure smooth development and timely delivery of all features, the Smart City AI Assistant was developed in carefully defined phases. Each week focused on key deliverables, allowing ample time for testing, integration, and polish.

### 📌 Weekly Milestone Chart

| **Week** | **Focus Area** | **Key Activities** |
| --- | --- | --- |
| Week 1 | Ideation & Research | Finalize problem statement, empathy map, brainstorming |
| Week 2 | Requirement Gathering & Tool Selection | Define user journey, functional specs, select models/tools |
| Week 3 | Core Module Development | Chat assistant, summarizer, KPI dashboard, eco tips |
| Week 4 | ML Modules & Report Generation | KPI forecasting, anomaly detection, PDF report output |
| Week 5 | UI Integration & Gradio Design | Tabbed interface creation, layout polish, user input validation |
| Week 6 | Testing, Bug Fixes & Optimization | Performance tuning, testing each module, model output review |
| Week 7 | Documentation & Submission | Finalize all reports, create documentation and screenshots |

## 🔁 Agile Mini-Sprint Approach

The development followed an **iterative and incremental model**, with a weekly sprint cycle:

* ✅ **Plan** – Define weekly deliverables
* 🔨 **Develop** – Build and test one module at a time
* 🧪 **Review** – Validate outputs, iterate based on feedback
* 🚀 **Integrate** – Plug the module into the Gradio interface

This minimized technical debt and ensured all features were usable and polished by the end of the cycle.