

Time Plan

First, I scheduled the plan according to the two-semester plan :24 Weeks.

First Phase is about designing, getting to know more about the project and the Market, and Gathering requirements for the project. (Weeks 1–12)

Second Phase is about implementation, Integration & testing the code. (Weeks 13–24).

I did this workflow according to the software Engineering Workflow (Research, Requirements , Design, Implementation , Testing , Deployment).

Phase 1 — Requirements + Design (12 Weeks)

Week	Activities / Tasks	Deliverables
Week 1–2	<ul style="list-style-type: none">• Problem analysis• Identify actors (patients, families, doctors, admin)• User research (interviews, surveys)• Market research & existing systems	<ul style="list-style-type: none">• Problem analysis report
Week 3–4	<ul style="list-style-type: none">• Functional requirements (Face recognition, reminders, GPS, dashboards, emotion detection)• Non-functional requirements (accuracy, security, usability, performance)• Business requirements• Prioritization (must-have vs nice-to-have)	<ul style="list-style-type: none">• Software Requirements Specification (SRS)• Use Case Diagram
Week 5–6	<ul style="list-style-type: none">• Literature review on AI modules• Review emotion detection, face recognition, anomaly detection• Select datasets• Choose machine learning models (BERT, CNN, DeepFace, Whisper, LSTM)	<ul style="list-style-type: none">• Literature review + methodology report

Week 7–9	<ul style="list-style-type: none"> • System architecture design • Component design (face module, speech module, emotion AI, GPS tracker) • Dashboard design (family, doctor) 	<ul style="list-style-type: none"> • Architecture diagram • Use case, data flow, sequence diagrams
Week 10–11	<ul style="list-style-type: none"> • UI/UX planning • Low-fidelity wireframes • Design for patient UI, family dashboard, doctor dashboard & admin panel • Accessibility considerations 	<ul style="list-style-type: none"> • Wireframes • UI/UX document
Week 12	<ul style="list-style-type: none"> • Integrate all design documents • Supervisor review • Approval of implementation plan 	<ul style="list-style-type: none"> • Complete Phase 1 documentation

Phase 2 — Implementation + Testing (12 Weeks)

Week	Activities / Tasks	Deliverables
Week 13–14	<ul style="list-style-type: none"> • Set up backend structure • Implement authentication • Set up databases (Neo4j + SQL/NoSQL) 	<ul style="list-style-type: none"> • Backend skeleton • Authentication module
Week 15	<ul style="list-style-type: none"> • Face recognition module (DeepFace/OpenCV) • Memory graph integration • Accuracy testing 	<ul style="list-style-type: none"> • Face recognition demo
Week 16	<ul style="list-style-type: none"> • Emotion detection pipeline <ul style="list-style-type: none"> • Voice emotion (LSTM) • Text emotion (BERT) • Basic integration tests 	<ul style="list-style-type: none"> • Speech + emotion modules demo
Week 17–18	<ul style="list-style-type: none"> • Medication reminders • Appointment alerts • GPS tracking service • Safe-zone detection 	<ul style="list-style-type: none"> • Assistance & safety system working

	<ul style="list-style-type: none">• Emergency button workflow	
Week 19–20	<ul style="list-style-type: none">• Family dashboard development• Doctor dashboard development• Messaging system	<ul style="list-style-type: none">• Completed dashboards• Real-time communication
Week 21	<ul style="list-style-type: none">• Predictive models• Anomaly detection• Smart alerts	<ul style="list-style-type: none">• Predictive AI module
Week 22	<ul style="list-style-type: none">• End-to-end integration• UI testing• AI evaluation• Security testing	<ul style="list-style-type: none">• Integrated system (v1)
Week 23	<ul style="list-style-type: none">• Final optimization• Deployment (backend + web app)• Accessibility improvements	<ul style="list-style-type: none">• Fully deployed system
Week 24	<ul style="list-style-type: none">• Final report• Final presentation• Demo video• Supervisor review	<ul style="list-style-type: none">• Final report & presentation• Practical demo

Gantt Chart:

