

30th Aug Intro

Hackathon Objective

To develop an **AI-powered system** that automatically converts healthcare software requirements into **compliant, traceable test cases**, integrated with enterprise toolchains. The goal is to reduce manual QA effort, accelerate product cycles, and ensure regulatory alignment in a highly sensitive domain.

MVP

Feature Area	Description
Multimodal Requirement Ingestion	Accepts inputs from PDF, Word, XML, Markup, and ALM tools like Jira/Polarion
AI-Powered Test Generation	Uses Gemini/Vertex AI to parse requirements and generate test cases with compliance tags
Compliance Mapping	Embeds FDA, IEC 62304, ISO 13485, GDPR rules into test logic and traceability
Traceability Matrix	Auto-generated bi-directional matrix linking requirements ↔ test cases ↔ defects
Enterprise Integration	Connects with Jira, Azure DevOps, Polarion via APIs for real-time sync
GDPR-Compliant PoC Mode	Supports masked data and audit logs for privacy-safe pilot deployments
Scalable Architecture	Microservices on Google Cloud with Firebase dashboards and BigQuery analytics

Team Contributions

Subir (Fullstack)

- Built upload interface and dashboard
- Developed traceability matrix UI
- Integrated frontend with Firebase and backend APIs
- Polished demo experience and export features

Hemant (Google Cloud)

- Set up Vertex AI, BigQuery, Firebase
- Built ALM tool connectors (Jira, Azure DevOps)
- Enabled auto-sync and audit logging
- Deployed scalable microservices on GCP

Subham (AIML)

- Designed NLP pipeline using Gemini
- Built test case generation logic
- Mapped regulatory standards to AI outputs
- Led compliance tagging and traceability logic

| **Intern** (Support) | QA, Documentation, Testing |

- Validated AI outputs and test cases
- Simulated GDPR PoC scenarios
- Assisted with integration testing and demo prep
- Maintained documentation and pitch materials |