Functional Requirements

IEEE: 3.2 | ISO: Functionality

- Developed an AI-powered solution for real-time health data analysis
- Engineered an IoT-based automation system using Arduino and MQTT for real-time infrastructure monitoring
- Designed and deployed machine learning model using TensorFlow and Keras for defect detection in PCB manufacturing
- Developed a CNN-based AI model using TensorFlow, Keras, and OpenCV to classify ovarian cancer subtypes
- Engineered a Deep Learning model using YOLOv5, Faster R-CNN, and OpenCV for automated PCB defect detection
- Built an AI-driven real-time health monitoring system using LSTMs, Django, and MQTT for predictive analytics

Non-Functional Requirements

IEEE: 3.3 | ISO: Usability

- Optimized predictive analytics, enhancing decision support, and improving patient care insights
- Increased operational efficiency and optimized resource utilization
- Improved accuracy, scalability, and production efficiency
- Achieved 88% accuracy in ovarian cancer detection
- Achieved 89% accuracy in PCB defect detection
- Achieved 90% accuracy in smart health monitoring

Business Rules

IEEE: N/A | ISO: N/A

- None

Constraints

IEEE: 3.4 | ISO: Portability

- None

Assumptions

IEEE: 3.5 | ISO: Maintainability

- None