

Maxwell Richard Mathew

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EDUCATION

St. Francis Institute of Technology <i>B.E. in Information Technology (AI/ML Honors)</i>	Mumbai, India 2023 – 2027
St. Anne's Convent Junior College <i>Higher Secondary Certificate (HSC)</i>	Mumbai, India 2023
St. Anne's Convent School <i>Secondary School Certificate (SSC)</i>	Mumbai, India 2021

PROJECTS

Nirogya (SIH Grand Finale 2025) | *Machine Learning, CatBoost Model, React, TypeScript, FastAPI, MongoDB*

- Developed an AI-powered Smart Community Health Monitoring and Early Warning System for water-borne diseases in rural Northeast India, addressing the official Smart India Hackathon 2025.
- Engineered secure RESTful APIs using FastAPI and JWT authentication for multilingual symptom reporting, disease prediction, and centralized health record management.
- Integrated a CatBoost machine learning pipeline to predict disease outbreaks using symptom reports, water quality indicators, weather conditions, and demographic data.
- Designed interactive dashboards featuring outbreak heat maps, disease analytics, and early warning alerts to support ASHA workers and government authorities in proactive decision making.

CodeRed AI (Google Developers Group HackX 2.0) | *React, Python, FastAPI, MongoDB, Twilio API, Mapbox*

- Developed an AI-powered emergency response platform enabling users to request emergency assistance instantly through WhatsApp without requiring a dedicated mobile application.
- Built a FastAPI backend integrated with the Twilio WhatsApp API to process emergency requests, extract live location, and coordinate ambulance dispatch workflows.
- Designed an intelligent decision engine that selects the optimal ambulance and hospital by analyzing traffic conditions, hospital availability, and estimated arrival time (ETA).
- Implemented real-time dashboards with ambulance tracking and route optimization using Mapbox to improve emergency coordination and reduce response delays.

ANNAM (Colloquium 2025) | *Python, React, Redis, FastAPI, MongoDB, CatBoost*

- Developed an intelligent food redistribution platform connecting farmers, NGOs, supermarkets, and delivery partners to reduce food wastage through AI-driven logistics.
- Integrated a CatBoost machine learning model to estimate crop shelf life and automatically prioritize marketplace sales or NGO donations based on spoilage risk.
- Implemented JWT-based authentication, geo-location matching, nearest-driver allocation, and real-time delivery tracking using FastAPI, MongoDB, and Redis.
- Designed an AI-assisted decision engine that optimizes food redistribution workflows by intelligently matching nearby NGOs and delivery partners for efficient rescue operations.

CERTIFICATIONS

- **Introduction to AI/ML and Data Science using Python** – Udemy (2025)
- **Deep Learning: Recurrent Neural Networks in Python** – Udemy (2025)

TECHNICAL SKILLS

Languages: Java, Python, TypeScript, JavaScript, SQL, C/C++
Frameworks & Technologies: Scikit-learn, React, FastAPI, REST APIs, HTML5, CSS3
Databases: MongoDB, MySQL, SQLite
Developer Tools: Git, GitHub, VS Code, Jenkins