MOHAMMED MAHEER

ROBOTICS AND ARTIFICIAL INTELIIGENCE ENGINEER

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Full Stack AI Engineer and Robotics Software Engineer with a passion for building intelligent systems that deliver real-world impact. Adept at solving complex problems through innovative, AI-driven solutions and optimizing user experiences with advanced technologies. Experienced in leading end-to-end projects, collaborating across disciplines, and developing scalable, high-performance systems. Known for blending technical expertise with creativity to drive meaningful, future-ready outcomes.

SKILLS AND COMPETENCIES

Deep Learning and A.I, Automation
Python NLP & LLMs (LLaMA, GPT, Whisper)
Text-to-Speech RESTful APIs
On-device Inference / Local LLMs
Prompt Engineering / API Integration
Cloud & Firebase (Basic)
Robotics & NLP
Computer Vision
MERN Stack (MongoDB, Express, React, Node.js)
HTML /CSS(OpenCV,OCR)
Frontend UI/UX Design
Git, GitHub, Docker (Basic) VS Code, Jupyter, Postman Agile Dev & Collaboration
Full Stack Development
Project Management
JavaScript (Node.js, React.js)
Speech-to-Text
Model Fine-Tuning & Quantization
Latency & Memory Optimization
Python & Flask Backend
ROS2, ZENOH MW

KEY ACHIEVEMENTS

Hackathons:

HackOverflow 3.0 Finalist

Shortlisted among the top 63 teams nationwide in HackOverflow 3.0, hosted at Pillai HOC College, Panvel. Built an AI-driven solution under tight deadlines, demonstrating innovation and strong technical execution.

Adobe India Hackathon 2024 – Round 2 Qualifier

Selected from 1,50,000+ teams for Round 2 (Build and Connect) of Adobe's national hackathon. Developed and pitched a scalable, AI-based application with speech and language capabilities.

Projects

- **AI Interview Platform**: Built an end-to-end AI interview and evaluation platform combining Whisper STT, NLP, and LLMs to automate 4+ stages of the interview workflow—transcription, contextual analysis, candidate evaluation, and structured feedback generation.
- **AI Recruitment Platform**: Developed an enterprise-grade recruitment system combining LLMs, RAG, vector embeddings, semantic search, and automated evaluation, consolidating 5+ recruitment activities including candidate screening, matching, interview analysis, ranking, and report generation.
- **LeadSign AI Mobile App**: Designed and deployed an AI-powered lead intelligence platform combining LLMs, vector retrieval, reranking, and automated prospect analysis across a multi-stage retrieval pipeline, reducing a traditionally multi-step lead-research workflow into a single automated application.
- **Whisper STT Pipeline**: Engineered a multilingual speech-to-text pipeline supporting 3 languages—English, Hindi, and Marathi—with audio preprocessing, transcription, summarization, knowledge-base generation, and downstream LLM-based question answering.
- **Face Recognition Attendance System webapp and mobileapp**: Built and deployed an ONNX + GCP attendance and face-verification platform supporting 150+ workers, with approximately 110–120 simultaneously active users during peak periods, real-time check-in/check-out, and location-based verification.
- **AI Voice Automation**: Designed multilingual conversational AI systems supporting 4 languages—English, Bahasa Melayu, Mandarin, and Tamil—integrating STT → LLM → business logic → TTS pipelines for automated customer interactions and human escalation.

- **AI Calling & Lead Automation:** Architected an AI voice-based lead qualification platform for up to 10 concurrent AI calls, capturing customer requirements, structuring responses, and routing leads to regional sales teams.
- **Rental & Payment Automation Platform:** Designed a rental-management architecture for 700+ rooms, scalable beyond 2,000, with automated reconciliation, QR payments, webhooks, tenant notifications, reporting, and role-based access.
- **Computer Vision Proctoring:** Developed an automated interview/exam monitoring system using YOLO and OpenCV for mobile-phone detection, suspicious activity, and browser/tab-switch monitoring.
- **Model Optimization:** Applied quantization, inference optimization, caching, and latency-reduction techniques across LLM and ML pipelines for cloud and edge deployment.
- **Agentic AI & RAG:** Built multi-stage workflows with LLMs, vector databases, rerankers, retrieval-augmented generation, tool calling, and REST APIs, including retrieval and generation evaluation.
- **Full-Stack AI Engineering:** Delivered AI applications with React/MERN, Python, Flask/FastAPI, REST APIs, Docker, GCP/VPS infrastructure, and vector databases from prototype through production deployment.
- **J.A.R.V.I.S. Offline AI Assistant:** Developing a privacy-focused local AI assistant combining LLMs, speech-to-text, text-to-speech, memory, and tool execution for desktop automation.

PROFESSIONAL EXPERIENCE

AI/ML Engineer, *Future Earth Design Solutions Pvt. Ltd., Bengaluru* **Oct 2026 - Present**

- Working on an RF-tracking drone payload, evaluating sensor selection, camera integration, and payload weight constraints.
- Exploring RF propagation and robotics simulation workflows using NVIDIA Isaac Sim and Sionna RT for technical feasibility studies.
- Collaborating on client requirements, system design considerations, testing plans, and technical documentation.

AI Engineer, *Efforts Solutions IT, Abu Dhabi (Remote)* **Feb 2026 - Oct 2026**

- Developed an enterprise-grade AI recruitment application using LLMs and vector embeddings to automate recruiting workflows.
- Developed a lead-generation application to automate sales workflows and support qualified-lead discovery.
- Built and deployed an ONNX and GCP face-recognition attendance platform supporting 150+ workers with real-time and location-based verification.

Robotics Software Engineer, *Acceleration Robotics, Pune, India* **Sep 2025 - Feb 2026**

- Developed and optimized ROS 2-based robotic software, focusing on middleware efficiency and low-latency communication.
- Worked on machine-learning concepts, data preprocessing, model development, and Python-based experimentation.
- Implemented and tested AI-driven modules for robotic perception, motion planning, and control.

PROFESSIONAL EXPERIENCE (CONTINUED)

AI Intern, *TechnoFly Solutions, Bengaluru* **Jun 2025 - Jul 2025**

- Developed an image-to-voice recognition system using Python, Tesseract OCR, OpenCV, and gTTS/pyttsx3.
- Implemented grayscale conversion, thresholding, and noise removal to improve OCR accuracy.
- Integrated text extraction with real-time text-to-speech synthesis.
- Optimized the pipeline for performance, latency, and support for different image formats.

AI Intern, *iGeeks Technologies Inc, Bengaluru* **Jun 2024 - Jul 2024**

- Worked on data science, data mining, machine-learning concepts, and model development.
- Gained practical experience with Python modules and machine-learning applications.
- Completed and presented an assigned machine-learning project.

EDUCATION

BACHELOR OF TECHNOLOGY IN ROBOTICS AND ARTIFICIAL INTELLIGENCE **May 2022 - Nov 2026**

NMAM Institute of Technology, Nitte, Karkala

- Coursework and hands-on experience in robotics, ROS, kinematics, dynamics, ABB robots, automation, artificial intelligence, and neural networks.

SSLC AND PU IN CBSE BOARD (PCM WITH INFORMATICS SCIENCES) **2018 - 2022**

Our Own English High School, Fujairah, UAE - 77.6%

East Coast English School, UAE - 92.2%

ADDITIONAL INFORMATION

- **Languages:** English, Hindi, Kannada, Arabic.
- **Certifications:** Introduction to Generative AI - Google Cloud; Robot Localization with Python and Particle Filters; Life Expectancy Prediction Using Machine Learning; Business Implications of AI; Excel Basics for Data Analysis; Emotion AI - Facial Key-point Detection; Selenium Automation.
- **Awards / Activities:** Co-Head Graphic Design, CSI (NMAMIT); Co-Treasurer, NSS IT Wing; Digital Head, Authorcraft.