

# MOHAMMAD TAHIR KHAN GOOTY

Certified AWS Cloud  
Practitioner | OCI | AI &  
Data Science Student

## CONTACT

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## PROFESSIONAL SUMMARY

I am a third-year Computer Science student specializing in Artificial Intelligence and Data Science, passionate about building innovative real-world tech solutions. With hands-on experience in Python development, AI/ML model integration, and full-stack web development using React and Next.js, my work spans cloud computing, AI-powered tools, and impactful projects. I thrive in collaborative environments, adapt quickly, and am eager to explore emerging technologies to solve meaningful problems.

## EDUCATION

### Muffakhamjah College of Engineering and Technology (MJCET) | 2023–2027

Bachelor of Engineering in Computer Science specialized in AI and Data Science

- Current CGPA: 9.17

## SKILLS

- AWS Cloud (with SDK), OCI, PostgreSQL
- TensorFlow, PyTorch, Transformers, VLM, LLM FT, YOLO
- AI/ML, Python, R, C, Java, HTML, CSS, React.js, Next.js
- Next.js, React, Tailwind CSS, Streamlit, FastAPI

## PROFESSIONAL HIGHLIGHTS

### R&D–(MJCET) | Apr 2025–Aug 2025

- Spearheaded end-to-end software development for Terra Rover, an autonomous rover for precision agriculture and mining.
- Built a 2-stage ML pipeline with YOLO-based detection for plant health scoring, achieving 92% accuracy.
- Integrated Claude VLM for real-time visual question answering (VQA), reducing field analysis time by 35%.
- Deployed scalable solutions using AWS Bedrock, Lex, and S3, ensuring 99.9% uptime..

### AWS Cloud Clubs – (MJCET) | Aug 2024–Sep 2025

- Coordinated 10+ AWS hackathons/workshops with 300+ participants, driving 40% increase in AWS certifications among peers.
- Developed an AI-powered chatbot using AWS Bedrock & Python SDK, handling 500+ student queries and reducing manual support load by 60%.
- Coordinated skill development initiatives, mentoring 50+ students in AWS Lambda, EC2, and cloud security.

### Google Developer Groups – (MJCET) | Nov 2024–Apr 2025

- Contributed to 3+ cloud-native projects, improving deployment efficiency by 30% using GCP services.
- Organized 5 hackathons and workshops engaging 200+ students, boosting adoption of Google Cloud tools.

### Freelancer on Fiverr (Image Generation) | Jan 2023 – Dec 2023

- Delivered 20+ AI-generated image solutions achieving 95% positive client ratings.
- Customized solutions for clients across 5+ industries.
- Secured repeat business from 10+ clients, generating consistent freelance income..

## PROJECTS

### SmartVis – Real-time AI Vision System | July 2025

- Stack: Python, YOLO11, PaliGemma 3B VLM, Tesseract OCR, PyTorch, CUDA
- Developed a real-time AI vision system combining object detection, vision language models, OCR, and speech processing for RTSP video streams.
- Achieved 60+ FPS performance with YOLO11 for object detection and integrated PaliGemma 3B for visual question answering with voice command support.
- Enforced multi-threaded processing with adaptive frame skipping and performance optimization for live video feed analysis, reducing latency by 25%..

### MediLens – AI Medical Diagnostic Tool | June 2025

- Stack: Python, PyTorch, Transformers, Streamlit, BiMediX2 Model, CUDA
- Built an AI-powered medical diagnostic tool that integrates multimodal patient data (text, X-rays, CT scans) for real-time transparent diagnostics in emergency cases, reducing diagnostic turnaround by 30%..
- Applied BiMediX2 multimodal medical model with support for multiple imaging formats and interactive chat interface for conversational AI interaction.
- Optimized for both CPU and GPU environments with customizable generation parameters.

### SCAI – Student Centric AI Educational Platform | June 2025

- Stack: Python, Streamlit, Google Gemini AI, LangChain, PIL, PyPDF2, python-docx.
- Executed a comprehensive AI-powered educational co-pilot that provides personalized learning experiences across multiple domains using Google's Gemini.
- Designed multi-modal document analysis system supporting PDF, DOCX, TXT with RAG approach for intelligent Q&A and interactive document exploration.
- Implemented image analysis with OCR capabilities, AI practice tests with session tracking and analytics.

### Terra Rover | April 2025

- Vision-Language Model (VLM) System for Agriculture & Mining
- Stack: Python, Claude VLM, AWS (Lambda, S3), Image Classification, yolo8n
- Fine-tuned Claude 3 Sonnet VLM for real-time visual question answering (VQA) on agricultural and mining datasets, boosting crop disease detection by 28%. Built AWS-integrated pipeline to deliver on-the-fly insights from images of crops or mining zones.
- Enabled field operatives to interact with a multimodal AI that supports image, text and voice queries for improved decision-making.

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## OTHER PROJECTS

- **Personal Portfolio Website** – a fully responsive portfolio with Next.js, React, Tailwind CSS, and Framer Motion, featuring advanced animations, dark-themed UI, and smooth transitions.
- **SmartSow Plant Disease Detector** – Deployed an AI-powered web app using TensorFlow, Streamlit, and Image Processing for early plant disease detection, improving accessibility for farmers and field agents.
- **Synapsify AI Aggregator** – Created a multi-LLM aggregator with FastAPI, Hugging Face BART, OpenAI/Groq/Gemini APIs, and AWS Cloud, reducing manual comparison by 80% and enabling consensus-based research insights.

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## CERTIFICATIONS

- AWS Certified Cloud Practitioner (AWS, 2025)
- OCI Certified Foundations Associate (OCI, 2025)
- AWS AI & ML Scholars 2025 Challenge (Udacity, 2025)
- Complete Python Bootcamp: Zero to Hero in Python (Udemy, 2025)
- AIML Bootcamp (GDG-MJCET, 2024)