

Tarqul Alam Opi

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About me:

A Computer Science graduate with a strong focus on Artificial Intelligence and Machine Learning. Experienced in building real-world AI solutions including LLM-based applications, RAG systems, and automation tools using technologies like OpenAI, Gemini, LangChain, and FastAPI.

Skilled in developing scalable, cloud-based applications on GCP with hands-on experience in React, Docker, and modern AI frameworks.

Academic Details:

- **B.Sc. in CSE**, Green University of Bangladesh, CGPA: 3.49/4.00 – (2024)
- **HSC**, Nasirabad College Mymensingh – (2019)
- **SSC**, Gafargaon Islamia Govt. High School – (2017)

Work Experience:

- **AI & Automation Engineer (R&D) | Riverside Select Services, LLC DBA Cottage Homecare Services (September 2025 - Present) [Profile](#)**
Spearheaded the design and integration of advanced GenAI models (Llama, Grok, OpenAI/Azure OpenAI) and RAG architectures using Azure Cognitive Search and PostgreSQL or NoRelational Database..
Developed high-performance AI applications and complex LLM workflows using Python and frameworks like LangChain.
Led the R&D and implementation of AI-driven process automation for critical internal functions, including Payroll, HR compliance, and financial workflows.
- **Software Engineer (R&D) | Dhaka Robotics (November 2023 - Present)**
Led the development and documentation of QA processes, enhancing software quality and ensuring strategic alignment.
Collaborated with product, design, and engineering teams to ensure the timely delivery of high-quality software.
Developed comprehensive test plans, test cases, and flow diagrams to cover various user scenarios.
Optimised QA project management in an Agile environment, improving software reliability and user satisfaction.
Responsible for designing, developing, and integrating AI/ML models (Llama, Grok, OpenAI) into applications.(R&D)

Software Testing and Quality Assurance Rule:

- Led QA process development and documentation for quality enhancement and strategic alignment.
- Collaborated with engineering, product, and design teams for timely, high-quality software delivery.
- Developed test plans, cases, and flow diagrams for thorough user scenario coverage.
- Managed QA lifecycle operations, enhancing software reliability and user satisfaction.
- Utilised Agile methodologies to optimise QA project management processes in fast-paced environments.

Technical Skills & Knowledge:

- **Languages:** Python, C, C++, javascript.
- **LLMs & AI Agents:** OpenAI, Groq, Llama, Deepgram, AI Agent Integration, n8n
- **AI/ML Tools:** TensorFlow, PyTorch, Google Colab, Llama, Grok, OpenAI & Deepgram API Integration
- **Testing Concepts:** SDLC, STLC, Functional, Regression, API, Ad-hoc Testing
- **Testing Tools:** Selenium, Bugzilla
- **Operating Systems:** Windows, Linux, Android
- **Vector Databases:** FAISS, ChromaDB, Pinecone, Weaviate
- **Deployment:** Docker, GCP, AWS, Streamlit.
- **Framework:** Nodejs, Flask, Fast api, Django.
- **APIs & Integration:** REST APIs, Postman
- **NLP/LLM Tools:** HuggingFace Transformers, LangChain, RAG pipelines, Prompt Engineering

AI/ML & Intelligent Agent Responsibilities:

- Designed and developed applications leveraging Large Language Models including Llama, Grok, and OpenAI via API integration.
- Integrate AI into systems and applications
- Ensure ethical AI practices and data compliance
- Continuously explore AI trends, DSA, NLP, and computer vision

Academic Major Thesis:

SL	Topic	Year	Description
1.	Deep Learning	2023-2024	Enhanced Road Lane Marking Detection System: A CNN-Based Approach for Safe Driving(2023 IEEE STI 5.0 Accepted Paper Link)
2.	Deep Learning	2023-2024	Computer Vision-Based Multiple Lane Detection From Night Vision And Occluded Images Using Deep Learning. (Running Works)

Key Projects:

- **AI Interviewer Platform:** Developed and deployed an interactive web application that simulates a job interview using AI.
 - **Link:** <https://ai-interviewer-opi.onrender.com/>
- **AI-Powered Web Testing Agent:** Created a web application using AI to test the functionality of any given website automatically.
 - **Link:** <https://webtestingai.streamlit.app/>
- **Voice-Activated AI Assistant:** Developed a voice-controlled AI assistant for home appliance repair services using Groq, OpenAI, LangChain, and Deepgram.
- **Bikroy Web Automation:** Created an automation tool to extract public user data from Bikroy.com automatically.
- **Committee & Document Management System:** Authored over 100 test cases for this project.

Hobby:

Volunteering, Yoga, Gardening, Cooking, Travel.

Achievements & Certification:

SL	Name	Year	Description
1.	VC Awards	2020 (Spring)	I got a result of 3.9 in this semester
2.	Certification	Updated	

Training & Workshop:

SL	Institute Name	Year	Description
1.	Bangladesh Computer Council	2023	Software Testing(Manual Testing)
2.	Software Testing(SRBD)	2024	Software Testing(Manual and Automated Testing)
3.	SDET-QA	2024	Software Testing(Automated Testing)
4.	Ostad	2025	Ai Agent Developer (Both coding and non-coding)

Online Judge & Contest Judge ID(s):

SL	Online Judge & Contest Judge Name	User_ID	Achievement or URL
1.	SRBD Advance Mock Test	taopi74	SRBD Advance Mock Test
2.	Medius ware Software Engineering Exam	taopi74	Mediusware Software Contest