

JAID MONWAR CHOWDHURY

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EDUCATION

Bangladesh University of Engineering and Technology (BUET)

February 2020 – March 2025

Bachelor of Science in Computer Science and Engineering

PUBLICATIONS

Chowdhury, J. M.*, Pial, S. M. R.*, Khan, J. Y., Ratul, M. R. Z., & Iqbal, A. (2025). *Trace2Script: A Framework for Web UI Test Script Generation from Natural Language Test Cases*. **Submitted** to ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (FSE), 2026.

RESEARCH EXPERIENCE

Prof. Reyhaneh Jabbarvand's Group, University of Illinois Urbana-Champaign

Urbana, Illinois

Remote Research Intern

June 2025 – Present

- Designing a multi-language framework for automated generation of semantically meaningful unit tests across C, Java, and Python using AI agents.
- Integrated advanced testing methodologies including fuzzing (AFL++) and symbolic execution (KLEE) to enhance code coverage and cross-language parsing capabilities.
- Implemented a hybrid test oracle generation system combining static analysis with dynamic execution traces for enhanced test reliability.
- Co-authoring a paper on the framework, preparing to-be submitted at **ISSTA 2026**.

Prof. Anindya Iqbal's Group, BUET

Dhaka, Bangladesh

Research Assistant

March 2025 – September 2025

- Developed an automated framework leveraging LLMs to translate natural language test cases into executable Playwright test scripts for automated Web UI testing.
 - Implemented the Web Agent architecture for autonomous Web UI traversal with comprehensive trace logging of element interactions.
 - Constructed and validated a comprehensive dataset of natural language test cases from production web applications for systematic framework evaluation.
- Developed a scalable full-stack inference system for deploying and serving locally fine-tuned LLMs.
 - Implemented automated pipelines for generating software use cases from business requirements and synthesizing corresponding test cases.

WORK EXPERIENCE

Yobo AI

Ontario, Canada

Remote Software Engineer

June 2024 – Present

- Developed a voice-based conversational AI agent for automating concurrent task-oriented restaurant operations (delivery, pickup, reservation, FAQs).
- Led the design of a dynamic context injection pipeline that retrieves and integrates specific knowledge into LLMs, enabling efficient querying of large-scale knowledge bases.
- Engineered the end-to-end delivery feature, including address capturing, validation using Google Maps API, and automated delivery acceptance/rejection based on distance calculation and dynamic delivery fee integration.

ACHIEVEMENTS AND AWARDS

Bangladesh Blockchain Olympiad 2024 | [Link](#)

Honourable Mention in Both AI Category & Blockchain Category

September 2024

- Led team to Honourable Mention among 250+ teams by developing an AI-powered health ecosystem featuring machine learning medical diagnosis and empathic AI therapist.
- Designed MEDIBLOC, a blockchain-based medical prescription management system with Attribute-Based Access Control (ABAC) for secure sharing of prescriptions between hospitals, pharmacies, and patients.

Hello Yobo AI Hackathon 2024 | [Link](#)

Second Runners up

May 2024

- Led team to 2nd runners-up position among 50+ teams by developing Athene, an offline Android LLM chatbot using Mediapipe API with 600 tokens/sec inference speed on mobile CPUs.

Therap Javafest 2023 | [Link](#)

Top 10 Finalist

August 2023

- Led team to Grand Finale (top 10/150+ teams) by developing a fullstack customer management application using Spring Boot and Angular with AI-powered analytics for revenue tracking and forecasting.

SUST Technovent 2023 | [Link](#)

First Runners up

January 2023

- Led team to 2nd runners-up position among 170+ teams by developing a blockchain-based authentication system with RFID technology for vault security. Custom JavaScript blockchain implementation passed 69 test cases.

HackNSU Season 3

Second Runners up

November 2021

- Led team to 2nd runners-up position among 30+ teams by developing Remedi, a telemedicine platform with AI-powered symptom diagnosis chatbot using Intelligent Machines API.

Academic Olympiads | [Link](#)

Physics, Chemistry, Mathematics

2017 – 2020

- Mathematics: First place winner at Jahangirnagar University Maths Olympiad.
- Physics: Translated official Olympiad book (Categories A & B) from Bangla to English; National Round participant (2017-2019).
- Chemistry: Achieved 11th place in National Round competition.

LANGUAGES

English: IELTS 8.0 (Reading: 8.5, Listening: 8.5, Speaking: 8.0, Writing: 7.5)

Bengali: Native Proficiency

SKILLS

Programming Languages: Python, Java, C/C++, TypeScript, JavaScript, SQL, Shell Scripting

Web Development: React, Flask, FastAPI, Django, Spring Boot, HTML, CSS

AI/ML & Data: PyTorch, LangChain, LangGraph, Autogen, CrewAI, PostgreSQL, SQLite, Supabase

DevOps & Cloud: Docker, Linux, DigitalOcean

Tools & Technologies: Git, GitHub, NodeJS, Selenium, AFL++, KLEE, Logstash, Hyperledger Fabric

REFERENCE

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