# 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

## RESEARCH EXPERIENCE

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

Urbana, Illinois

Remote Research Intern

June 2025 – Present

- Developing a framework to generate semantically meaningful unit tests across multiple programming languages (C, Java, and Python).
- Designed tools and workflows for enhanced test reliability and maximise code coverage.
- Wrote a modular component to provide the agent with multi-language parsing and generation capabilities.
- Implemented a semantic analysis module to deepen the agent's program understanding.
- Conducted evaluations of scalability, reliability and test coverage enhancements.
- 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 agentic framework that translates natural language test cases into executable Playwright test scripts for Web UI test automation.
- Implemented the Web Agent architecture to enable autonomous Web UI traversal and deployed an end-to-end backend and frontend infrastructure for the research framework.
- Implemented and deployed the end-to-end backend and frontend infrastructure for the research framework.
- Curated a dataset of natural language test cases from real-world websites for evaluation.
- Conducted evaluations of maintainability, robustness, and quality of the scripts against industry-standard tools.
- Co-first authored a paper soon to-be submitted at FSE 2026.

## 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 structured databases.

## 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 | Link

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

#### PROGRAMMING SKILLS

Languages: Python, Java, C++, JavaScript, C, SQL, Shell Scripting

Databases: PostgreSQL, MySQL, MongoDB, Firebase

Web Development: Django, FastAPI, ReactJS, Flask, NodeJS, Spring Boot, HTML, CSS

Technologies & Tools: AFL++, KLEE, Logstash, Git, GitHub, Docker, AWS (Amazon S3), Hyperledger

Fabric

## REFERENCE

## Reyhaneh Jabbarvand

University of Illinois Urbana-Champaign, Urbana, Illinois

Assistant Professor, Computer Science and Engineering

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## Anindya Iqbal

Professor, Computer Science and Engineering

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