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# Mahmud Zaman Bali

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## Summary

Aspirant software developer with a MSc in Artificial Intelligence. Proven track record in building complete web based applications and applying CI/CD practices. Seeking software development roles where I can contribute to innovative, user-focused projects.

## Education

### Queen Mary University of London

London, United Kingdom

*MSc, Artificial Intelligence*

2022 – 2023

- **1st class Distinction.**
- **Modules:** Natural Language Processing, Machine Learning, Applied Statistics, Deep Learning.

### American International University-Bangladesh

Dhaka, Bangladesh

*BSc, Computer Science and Engineering*

2017 – 2021

- **GPA:** 3.93/4.00
- **Modules:** Software Engineering, Web Technologies, Object Oriented Programming, OOP Analysis & Design.
- **Achievements:** Dean's List Award.

## Projects

### JavaScript Comment Generation | *PyTorch, Numpy, Pandas, Hugging Face, Jupyter Notebook*

- Investigated the use of pre-trained transformer models for JavaScript code summarization tasks.
- Researched and implemented state-of-the-art Natural Language Processing (NLP) techniques within the software development context.
- Analysed the performance of different models using relevant evaluation metrics.
- Conducted regular progress reviews with supervisor, ensuring research alignment and addressing challenges.

### BugBlitz | *Next.js, .NET Core, PostgreSQL, Docker, Azure*

- Developed using .NET Core 8 and Next.js by adhering to SOLID guidelines.
- Devised secure authentication, built CRUD operations, improving project efficiency.
- Decreased code complexity by 20% by delegating authentication to an OAuth2 microservice.
- Applied caching in Next.js, substantially cutting back on database queries and boosting efficiency.
- Deployed on Azure VM using Docker Swarm (CapRover) with HTTPS for API & Client.
- GitHub: <https://github.com/mzbali/bugblitz>
- Website: <https://bugblitz.mzbali.com>

## Experience

### Teaching Assistant (Computer Science)

Dhaka, Bangladesh

*American International University-Bangladesh*

2020 – 2021

- Developed lesson materials for CS courses, emphasising programming concepts and problem-solving.
- Provided focused tutoring to students, aiding in programming challenges and code debugging.
- Designed quizzes and assessments to gauge student comprehension of core CS concepts.
- Collaborated with instructors to address student programming difficulties, promoting academic success.

## Technical Skills

**Machine Learning:** PyTorch, Numpy, Pandas, Hugging Face, Jupyter Notebook

**DevOps:** Git, Bash, Docker, GitHub Actions

**Web Development:** React, Next.js, Python C#, Typescript, JavaScript

**Databases:** PostgreSQL, Redis

**Others:** Jupyter Notebook, VS Code, Pycharm, Rider, Linux, MacOS

## Language Proficiency

**English:** Fluent (IELTS 7.5)

**Bengali:** Native