

Mohammad Zaed Iqbal Khan

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EDUCATION

North South University

Oct 2020 - June 2024

Bachelor of Science in Computer Science and Engineering; GPA: 3.93/4.00 (98%)

SKILLS

Languages: Python, Javascript, SQL, Java, C/C++, Solidity, Dart

Technologies: Django, Flask, React, Node, Express, Flutter, MongoDB, Firebase, SQLite3, Postman, PyTorch, TensorFlow, Jupyter, Git, Linux, Figma

EXPERIENCE

North South University

Dhaka, Bangladesh

Research Assistant

Jan 2024 - Present

- Leveraged analysis of **CLIP** and **OpenCLIP** model to resolve long-standing out-of-memory issue by extraction of image and text **embeddings** to use separately during training and zero-shot inference.
- Configured models for training and evaluation on **Herbarium** dataset with custom captions generated using **prompt engineering** on **ChatGPT**, utilizing **PyTorch** on a NVIDIA RTX A4000.

HiLinkz Ltd

Dhaka, Bangladesh

Software Engineering Intern

Aug 2022 - Jan 2023

- Architected a **multi-service** Telemedicine platform called “SmartDoctorz” using **Flutter** and **Dart**.
- Integrated a delivery service into an e-commerce application using **Firebase** and **Google Maps API**.
- Used **Laravel** and **MySQL** to implement **CRUD** in backend and connect to app with **REST APIs**.

PROJECTS

Gaze2Speech - Python, PyTorch, Jupyter, MongoDB, Express, Node, Flutter, Dart

- Curated and **preprocessed** a diverse dataset of 720 videos by recording individuals from various demographics as they used their eye-movements to trace letters of the English alphabet.
- Experimented with **Convolutional Neural Networks (CNNs)** for tracking pupil-movements to recognize and predict letters, which were fed into a **text-to-speech** engine.
- Integrated **AI pipeline** for converting gaze to speech into a **Flutter** mobile application using **Node** and **Express** for **API** development and connecting to **MongoDB** for storing video metadata and **Google Drive** for storing recorded videos.

KhelaHobe - Vercel, React, MongoDB, Express, Node, Flutter, Dart

- Architected a **website** and **mobile app** for **real-time** field booking in Bangladesh, utilizing **REST APIs** to manage bookings across web and mobile platforms.
- Used **React** for web frontend and **Flutter** and **Dart** for mobile app, connecting them to a unified backend built using **Express** and **Node** connected to **MongoDB**.
- Incorporated a marketplace for athleisure products utilizing **Stripe API** for online payment.

RITU - Django, HTML, CSS, JavaScript, SQLite3, Android Studio, Java, Firebase

- Architected an **online game** incentivizing users to complete tasks that promote awareness of environmental challenges.
- Built for both web using **HTML, CSS**, and **JavaScript** for frontend with a **Django** backend connected to **SQLite3** database.
- Built for android using **Java**, **Android Studio**, and connected to **Firebase**.

AWARDS

- **World Highest:** IGCSE Biology (93%) 2018
- **Country Highest:** IGCSE English (97%) 2018
- **Champion:** HackNSU - Inter-University Hackathon, North South University 2021
- **First Runners-Up:** Green Genius - Inter-University Project Showcase, Independent University Bangladesh 2022
- **First Runners-Up:** Odommo’50 Techfest - Inter-University Hackathon, Brac University 2022
- **First Runners-Up:** Blockchain Category, BUET CSE FEST - Inter-University Hackathon, BUET 2023