

TANJIM BIN FARUK

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Education

Colorado State University

Master of Science in Computer Science (Cumulative GPA - 4.0/4.0)

August 2022 – May 2024 (Expected)

Fort Collins, Colorado, USA

Bangladesh University of Engineering and Technology

Bachelor of Science in Computer Science and Engineering (Cumulative GPA - 3.63/4.0)

February 2016 - February 2021

Dhaka, Bangladesh

Work Experience

Graduate Teaching Assistant

Colorado State University

August 2022 – Present

Fort Collins, Colorado, USA

- Conducted help desk sessions, addressed student inquiries, provided support for the DeterLab testbed and evaluated lab assignments and exam scripts for the *Computer Networks And The Internet* [↗](#) and *System Security* [↗](#) courses

Software Engineer | F#, C#, .NET

Chaldal [↗](#)

February 2021 – May 2022

Dhaka, Bangladesh

- Developed the entire backend of *Chaldal Vegetable Network* [↗](#) in F# as part of a two-person team, contributing to a **66%** increase in order volume, an **81%** growth in vegetables served, and a **113%** boost in revenue
- Engineered an *Operation Center Sorting Algorithm* for Chaldal Vegetable Network, streamlining the entire perishable product flow inside a warehouse
- Enhanced the *Open Street Map* data import process, enabling bulk updates with **zero** SQL Server database downtime
- Developed a Geocoding API utilizing *Apache Lucene* for precisely locating customer buildings through search engine indexing
- Implemented a Reverse Geocoding API, handling an average of **30k** daily requests and peaks of **50k**, to convert latitude-longitude data into customer addresses

Projects

Scientific Claim Detection in Twitter Dataset Using LLMs [↗](#) | Python

August 2023 - December 2023

- Assessed the effectiveness of Large Language Models such as *ChatGPT* and *Llama 2* in identifying scientific claims with different prompt engineering techniques, using metrics like Accuracy, Precision, Recall, and F1 score

Securing Medical Data with Blockchain [↗](#) | Solidity, Java Spring Boot, React

January 2023 - May 2023

- Deployed a Smart Contract on the Ethereum test network to streamline the doctor-patient registration and access control process
- Leveraged Public-Key Cryptography to securely exchange medical records between doctors and patients, supported by a Spring Boot server
- Built a React-based interface for doctors and patient registration, as well as for uploading, accessing, and revoking permissions to medical records

License Plate Recognition [↗](#) | Python, NumPy, OpenCV

August 2022 - December 2022

- Trained a *YOLOv5* model using a public domain dataset from Kaggle to detect license plates
- Extracted texts from license plates by performing Character Segmentation with Contour Detection with the help of *EasyOCR* and *OpenCV*

TCP Reset Attack [↗](#) | C, Python

July 2019 - September 2019

- Wrote a Python script to perform a Man-in-the-Middle attack by spoofing *ARP* packets
- Employed the *pcap* API and raw socket programming to craft a TCP Reset packet, effectively terminating the video streaming connection between server and client

Technical Skills

Languages: F#, C#, SQL (Professional), Python, Java, C++ (Familiar)

Frameworks: Spring Boot, React, PyTorch

Database: SQL Server, MariaDB, Oracle

Data Analytics: Pandas, NumPy

Version Control: Git, GitHub, Azure DevOps

Leadership/Extracurricular

- Assisted in organizing Systems Design webinars for BUET System Analysis, Design and Development Community [↗](#)
- Directed a team of 10+ members in organizing events as Vice President of the university's quiz club [↗](#)
- Received a certificate of appreciation from the Embassy of Sweden for assistance in organizing Sweden Bangladesh Nobel Memorial Quiz [↗](#)