

# Md. Main Oddin Chisty

Email: chisty2996@gmail.com

- Google Scholar • Github • LinkedIn • Portfolio

## RESEARCH INTERESTS

- Neuromorphic Computing, Machine Learning, Deep Learning, LLMs, HCI, NLP, Cybersecurity, Blockchain

## EDUCATION

- **Khulna University of Engineering & Technology**  
• *Bachelor of Science - Computer Science and Engineering*

Khulna, Bangladesh  
February 2017 - May 2023

## RESEARCH EXPERIENCE

- **Research Collaboration with Dr. Zijie Zhang** July 2025 - Present
  - University of Texas at San Antonio (UTSA)
    - Currently working on a research for cybersickness detection and mitigation in VR using ML/DL techniques with XAI.
    - Co-developed VB-Score, a verification-based evaluation framework for medical LLM question-answering, and demonstrated through systematic analysis of GPT-4, Claude Sonnet 4.5, and Gemini 2.5 Flash that high semantic similarity masks critical entity-level inaccuracies and condition-based performance disparities, revealing significant medical safety and health equity risks.
    - Worked in HCI domain on analysis of the impact of generative AI tools in the automated industry i.e. trust, job security and accountability.
    - Proposed A3D (Adaptive Autonomous Defense), a GraphSAGE- and temporal-encoder-based framework with a bandit-driven adaptive agent to detect and mitigate RPC manipulation attacks in Optimistic Rollups, achieving 0.9973 AUC on large-scale Optimism transaction data while preserving L1 verification integrity and L2 throughput efficiency.
- **Thesis work with H. M. Abdul Fattah** March 2020 - February 2022
  - Khulna University of Engineering & Technology
    - Worked on classification of Alzheimer's Disease from MRI images using deep learning and image processing techniques.
    - Contributed to the research ideation by actively designing iterative approaches to experiment on the researched classification method.
    - Developed holistic approach for pre-processing 3D MRI images.
    - Implemented iterative approaches, ran the experiments, analyzed the results, and wrote the papers.
    - Actively participated in presenting both methodologies for two research conferences where our papers got published.

## PUBLICATIONS

- **Beyond Semantic Similarity: A Component-Wise Evaluation Framework for Medical Question Answering Systems with Health Equity Implications:** The 9th annual ACM FAccT conference 2026, Submitted
- **Automated Workplace in Transition: Trust, Job Security, and Collaboration with GenAI:** The 9th annual ACM FAccT conference 2026, Submitted
- **A3D: Adaptive Autonomous Defense Against RPC Manipulation Attacks in Optimistic Rollups:** The 35th USENIX Security Symposium 2026, Submitted
- **Prompt Injection Detection Using Ensemble of BERT and LSTM with GloVe Embeddings:** Published in 2024 13th International Conference on Electrical and Computer Engineering (ICECE)  
**Authors:** Md. Main Oddin Chisty; Abu Noman Md Sakib, Md Somir Khan, Md. Badiuzzaman Shuvo  
**Link:** <https://ieeexplore.ieee.org/abstract/document/11024700>
- **Alzheimer's Disease Diagnosis from MRI images using ResNet-152 Neural Network Architecture:** Published in 2021 5th International Conference on Electrical Information and Communication Technology (EICT) (DOI: 10.1109/EICT54103.2021.9733507)  
**Authors:** Projapoti Roy; Md. Main Oddin Chisty; H.M. Abdul Fattah  
**Link:** <https://ieeexplore.ieee.org/abstract/document/9733507>

## CONFERENCES ATTENDED

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- M.M.O Chisty, "Prompt Injection Detection Using Ensemble of BERT and LSTM with GloVe Embeddings," 13th ICECE, 2024, Dhaka, Bangladesh (Podium Presentation)
- M.M.O Chisty, "Alzheimer's Disease Diagnosis from MRI Images using ResNet-152 Neural Network Architecture," 5th EICT, 2021, Khulna, Bangladesh (Podium Presentation)

## PROFESSIONAL EXPERIENCE

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- Brain Station 23 PLC** On-Site  
• *Senior Software Engineer LI - (Full Time)* September 2024 – January 2026
  - Led development of an ML-based insurance fraud detection system, built an LLM-powered cross-platform chatbot SDK, delivered production-grade Flutter apps (Guardian Life) published on App Store and Play Store using clean architecture, and mentored developers at Geeky Solutions Learnathon 3.0.
- Apsis Solutions Ltd.** On-Site  
• *Associate Software Engineer - (Full Time)* November 2022 – August 2024
  - Developed enterprise Salesforce Automation (SFA) apps including Mother's Smile (multi-app suite), Prism (BAT Bangladesh with offline capability and Bluetooth printing), and Wings (international Cambodia-based project) using Flutter, Dart, Riverpod, Firebase, Hive, SQLite, and MVC architecture.
- The Umbrella Management Ltd.** On-Site  
• *Research & Development Engineer - (Full Time)* February 2021 – September 2022
  - Built Umbrella Keeper, a Flutter-based Android prototype delivering secondary real estate services through a centralized mobile platform.

## SKILLS SUMMARY

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- **Languages:** Python, SQL, C++, Dart, Swift
- **DL/ML Libraries:** Pytorch, Scikit-learn, TensorFlow, Pandas, Keras, NLTK, NLPAUG, OpenCV
- **Data Visualization:** Matplotlib, Seaborn
- **Tools:** Android Studio, Postman, Xcode, Anaconda, GIT, MySQL, SQLite
- **Operating System:** Linux, Windows, MacOS
- **Version Control:** Git
- **Architecture:** MVC, MVVM, Clean

## STANDARDIZED TEST SCORE

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- **International English Language Testing System (IELTS)** 7.5  
• *Listening-7.5, Reading-7.5, Writing-7.0, Speaking-7.5* August 2025

## HONORS AND AWARDS

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- Government Scholarship in HSC Examination, 2016 (top 0.2% nationwide)
- Honourable Mention Award Nomination at Notre Dame College, Dhaka for outstanding performance in both academic and extracurricular activities - January, 2016

## CERTIFICATIONS

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- **Convolutional Neural Network:** DeepLearning.AI, April 2020
- **Machine Learning Foundation-A Case Study Approach:** University of Washington-MOOC, April 2020
- **Neural Networks and Deep Learning:** DeepLearning.AI, April 2020

## EXTRA-CURRICULAR ACTIVITIES

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- **Special Group Interested in Programming Contest:** Member, 2017
- **KUET Debating Society:** Member, 2018
- **Notre Dame English Club:** Vice President, 2015