Mohammad Saqib Hasan

msaquibhasan@gmail.com
mdshasan@cs.stonybrook.edu
(631)-681-5567

Education

Stony Brook, NY **Stony Brook University** **Aug 2021 – Now**

- Ph.D. in Computer Science. **CGPA**: 3.92. **Research advisor**: Niranjan Balasubramanian.
  Research area: Synthetic Distillation, Preference Optimization, Retrieval Augmented Generation

Dhaka, Bangladesh **BUET** **Jul 2014 – Oct 2018**

- B.Sc. in Computer Science and Engineering. **CGPA**: 3.80.

Employment

Applied Scientist Intern **Amazon** **May 2025 – Aug 2025**

- Worked in the Delivery Experience AI team to develop LLM multi-agent architectures for knowledge augmented database analysis and structured knowledge creation.
- My system helped Amazon engineers save valuable hours in terms of analysis formulation and communication overhead with business units

Research Engineer **BUET** **Nov 2018 – Dec 2020**

- Worked on multiple projects on neural networks ranging from developing to mammal inspired weight initialization to building data optimized (4% of dataset) fake news detectors to neural compression algorithms achieving 5-35x compression. Also won multiple 'ICT Innovation Fund' research grants amounted to $ 36,000.

Technical Experience

Paper

- **Teaching an Old LLM Secure Coding: Localized Preference Optimization with Distilled Preferences** ACL 2025
- **Handling Open-Vocabulary Constructs in Formalizing Specifications: Retrieval Augmented Parsing with Expert Knowledge**. COLM 2024
- **Compressed neural architecture utilizing dimensionality reduction and quantization**. Applied Intelligence, Springer
- **Truth or lie: pre-emptive detection of fake news in different languages through entropy-based active learning and multi-model neural ensemble**. ASONAM 2020
- **Neuro-scientific analysis of weights in neural networks**. IJPRAI, World Scientific

Projects

- **Efficient Named Entity Recognition (NER)** : Devised a framework for NER by combining weak supervision and active learning that achieved full supervision accuracy with only 40% data.
- **Analysing Covid Vaccination Rates** : Analysed Covid-19 vaccination rates among US counties using public data and social media and created prediction models to measure future rates with low error rates of 1%.

Service and Awards

- Worked on the DARPA SciFy project for Scientific Claim Verification
- Worked on grant NAIRR210140 awarded by NAIRR Pilot Program for developing efficient LLM agents
- Received the prestigious SUNY RF Academic Fellowship for Summer, 2022
- Organizer of the HerWill Datathon 2022.
- Reviewer for journals and *ACL Rolling Review (ARR)*, *Neural Processing Letters (Springer Nature)* and *Artificial Intelligence (Springer Nature)*