

Mohammad Saqib Hasan

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Education

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|---|-------------------------------|----------------------------|
| Stony Brook, NY | Stony Brook University | Aug 2021 – Now |
| <ul style="list-style-type: none">• Ph.D. in Computer Science. CGPA: 3.92. Research advisor: Niranjana Balasubramanian.• Research area: Synthetic Distillation, Preference Optimization, Retrieval Augmented Generation | | |
| Dhaka, Bangladesh | BUET | Jul 2014 – Oct 2018 |
| <ul style="list-style-type: none">• B.Sc. in Computer Science and Engineering. CGPA: 3.80. | | |

Employment

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|---|---------------|----------------------------|
| Applied Scientist Intern | Amazon | May 2025 – Aug 2025 |
| <ul style="list-style-type: none">• 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 upto 12 hours per week and on average 3 hours per analysis. | | |
| Research Engineer | BUET | Nov 2018 – Dec 2020 |
| <ul style="list-style-type: none">• 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)*