

# H M QUAMRAN HASAN

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## SKILLS

- **Languages:** Python (6 years), SQL (4 years), C (2 years), JAVA (1 year).
- **Frameworks & Tools:** Django ORM, TensorFlow, PyTorch, Keras, Pandas, NumPy, Scikit-Learn, Seaborn, Selenium, OpenCV, Figma, Hotjar, Redash, Git, LangChain
- **Cloud Computing & Data Management:** AWS, Google BigQuery, Google Analytics, Google Tag Manager, Tableau, MySQL, PostgreSQL, IBM SPSS Statistics, SAP Analytics Cloud.

## INDUSTRY EXPERIENCE

**AMII** | Edmonton, Canada | *Work-Integrated Learning Opportunity (Client Coaching)* Dec 2024 - Apr 2025

- Built case studies for 5 startups on using Transformers for Ectopic Beat Detection, Differential Privacy with LLMs, and agentic AI.
- Collaborated with AMII Scientists to provide technical coaching to startups in integrating ML techniques into their service.

**MolpaxBio** | Daejeon, S. Korea | *AI Researcher* Feb 2024 - June 2024

- Developed a novel metric and a model with a precision of 0.83 for cell structure detection for qualitative and quantitative evaluation of NASH.
- Achieved an FID score of 12.97 and precision of 0.77 after developing a GAN model to generate lung tissue WSI patches.

**SicPama** | Seoul, S. Korea | *Data Scientist* Nov 2022 - Feb 2023

- Led the UX/UI team to optimize the service UI based on user behavior analysis using Hotjar and Google Analytics.
- Designed and implemented a streamlined data collection strategy using Google Tag Manager.
- Achieved a 90% reduction in data collection time by automating POS data collection.
- Improved sales by developing a recommendation system from the ground up.

**Kooky** | Seoul, S. Korea | *Data Analyst* Jan 2022 - Aug 2022

- Achieved a 150% increase in users by identifying potential markets and improving market-wise user experience.
- Achieved an 80% increase in user engagement by leading the content team based on user behavior analysis.
- Guided data-driven go-to-market and artist selection through user location and behavior analysis.

## RESEARCH EXPERIENCE

**UofA xAI Lab** | Edmonton, Canada | *Research Assistant* Sep 2024 - Present

- Working on integrating large language models in the fields of explainable medical and legal AI.

**KAIST Data Mining Lab** | Daejeon, S. Korea | *Research Intern* Jul 2023 - Dec 2023

- Contributed to the DB4DL project, focusing on enhancing distributed training efficiency for Transformers. Conducted research on models such as BERT and T5 to identify optimal parallelism strategies.

**KAIST Users and Information Lab** | Daejeon, S. Korea | *Undergraduate Student Researcher* Mar 2023 - Dec 2023

- Enhanced ChatGPT's accuracy for reasoning tasks in Bengali by 20% through back translation and CoT reasoning.
- Established the BEnQA English-Bengali parallel corpus, the first dataset comprising 5,161 science questions from the Bangladesh national curriculum grade school exams.
- Proposed a prompting strategy that consistently improves performance in Bengali.

## PUBLICATIONS

Sheikh Shafayat, **H M Quamran Hasan**, Minhajur Rahman Chowdhury Mahim (2023, December 16). BEnQA: A Question Answering and Reasoning Benchmark for Bengali and English. ACL Findings 2024, Bangkok. Thailand.

## EDUCATION

University of Alberta (UofA) Sep 2024 - Present

*Masters of Science in Computer Science*

Supervised by Dr. Randy Goebel, Dr. Mi-Young Kim

Korea Advanced Institute of Science and Technology (KAIST) Sep 2019 - Feb 2024

*Bachelor of Science in Computer Science & Business Technology Management*

## LEADERSHIP AWARDS & EXTRACURRICULARS

**Computer Science Graduate Students Association** | *Vice President* Sep 2024 - Present

**KAIST International Students Association** | *Deputy Secretary & Director of Welfare Division* Aug 2021 – Jan 2023

**UofA Department of Computing Science Recruitment Award Recipient**

**KAIST Leadership Award Recipient**