H M QUAMRAN HASAN

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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

CGPA: 3.74/4.30, (94.4/100), Honors: Cum Laude

SKILLS

- Languages: Python (5 years), SQL (3 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.
- Cloud Computing & Data Management: AWS, Google BigQuery, Google Analytics, Google Tag Manager, Tableau, MySQL, PostgreSQL, IBM SPSS Statistics, SAP Analytics Cloud.

RESEARCH EXPERIENCE

UofA xAI Lab | Edmonton, Canada | Research Assistant

Sep 2023 - 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, comprising 5,161 science questions from the Bangladesh national curriculum grade school exams, including many that involve multi-step reasoning.
- 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.

INDUSTRY EXPERIENCE

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 UX/UI team to optimize 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.

LEADERSHIP AWARDS & EXTRACURRICULARS

• **UofA** | *Teaching Assistant*:

Sep 2024 - Present

Serving as a TA for the database course assisting with grading, lectures, and conducting lab sessions.

• KAIST | Teaching Assistant:

Jul 2023 – Dec 2023

Served as a TA for English as a Foreign Language courses at KAIST obtaining 100% satisfaction level from professors.

• 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
- KAIplus Scholarship Recipient