Ayan Antik Khan

Software Engineer & Researcher

Website | Google Scholar | GitHub | LinkedIn

☎ +8801777187087
✉ ayanantikkhan@gmail.com
ayanantik.khan@iqvia.com

RESEARCH INTERESTS

- Trustworthy NLP
- Low-Resource & Multilingual NLP
- Cognition & Reasoning in LLMs
- Application of NLP in Human-AI Interaction

WORK EXPERIENCE

IQVIA   *June 2023-present*
Software Development Engineer

PUBLICATIONS

An Empirical Study On The Characteristics Of Bias Upon Context Length Variation For Bangla
- Jayanta Sadhu*, **Ayan Antik Khan***, Abhik Bhattacharjee, Rifat Shahriyar

    Keywords: Bias & Fairness, Low-Resource NLP

    Accepted at Findings of *ACL 2024*

    Preprint | *Proceedings*

Multi-ToM: Evaluating Multilingual Theory of Mind Capabilities in Large Language Models
- Jayanta Sadhu*, **Ayan Antik Khan***, Sanju Basak, Noshin Nawal, Abhik Bhattacharjee, Rifat Shahriyar

    Keywords: LLM Reasoning, Multilingual NLP

    Under review at *COLING 2025*

    Preprint

(* Equal contribution)

EDUCATION

Bangladesh University of Engineering and Technology   *2018-2023*
B.Sc. in Computer Science and Engineering   CGPA: 3.85/4.00

Notre Dame College   *2015-2017*
Higher Secondary School Certificate   GPA: 5.00/5.00

St. Joseph Higher Secondary School   *2007-2015*
Secondary School Certificate   GPA: 5.00/5.00

PROJECTS

Bangla Named-Entity-Recognition ↗
Amazon SageMaker | Jupyter Notebook   *January 2023*

- ML & DL Models trained for the Bangla Complex Named Entity recognition task
- Developed during the NLP Hackathon organized by BdOSN in collaboration with AWS

Grammatical Error Detection and Correction for Bangla ↗
Google Colab   *April 2023*

- Creation of synthetic dataset containing grammatical errors from famous Bangla newspapers
- Finetuning of Bangla Language Models (BanglaBERT, BanglaT5) to detect and correct grammatical errors
- Developed for the CSE 472 Machine Learning Sessional term project

Vectorized Convolutional Neural Network from Scratch ⬀
Google Colab | Kaggle Notebook *March 2023*
- A Convolutional Neural Network model from Scratch without any external libraries
- Trained on Bengali Handwritten Digits from the *NumtaDB* Dataset.
- Developed as the final assignment for CSE 472 Machine Learning Sessional course

Notabene ⬀
React.js | Django REST Framework | PostgreSQL *June '22 - September '22*
- A browser based knowledge management tool
- Based on taking notes & easy highlighting of any article on the web.

TCP Faster Recovery ⬀
ns-3 *January '22 - February '22*
- An ns3 based implementation of a TCP Congestion Control algorithm.
**More on Github

TECHNICAL SKILLS

Languages: Python, C++, Java, Typescript, HTML, CSS, SQL
Machine Learning: PyTorch, Scikit-Learn, Tensorflow, wandb, pandas, numpy
Libraries: ReactJS, ns3
Frameworks: Django, Angular, Bootstrap
DBMS: PostgreSQL, Oracle
Misc: Git, Shell Script

NOTABLE ACADEMIC COURSES

Machine Learning, Artificial Intelligence, Simulation and Modelling, Bioinformatics, High
Performance Database Systems, Operating Systems, Computer Security, Computer Networking,
Computer Graphics, Compiler Design, Software Developement, Microprocessors and Microcontrollers,
Information System Design, Object Oriented Programming

POSITIONS OF RESPONSIBILITY

Organizer, BUET CSE Festival *2022*
Executive Member, Scintilla Science Club *2013-2015*

AWARDS & HONOURS

- Recepient of **IQVIA Gold Impact Award** for contributions to the team
- Recepient of **RISE Research Grant Award** for undergraduate thesis.
- Recepient of **Dean's List** awards (6 out of 7 graded terms) & **University scholarships** for academic excellence.
- Recepient of **Scholarships** in secondary and higher secondary level.

CERTIFICATIONS

Structured Machine Learning Projects ⬀
Coursera | Deeplearning.ai *Issued: August '20*

Deep Learning Specialization ⬀
Coursera | Deeplearning.ai *Issued: August '20*
- Neural Networks and Deep Learning ⬀
- Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization ⬀
- Convolutional Neural Networks ⬀
- Sequence Models ⬀