Monoshiz Mahbub Khan

Personal website ◇ LinkedIn profile
monoshizmk@gmail.com

EDUCATION

PhD in Computing and Information Sciences
Rochester Institute of Technology
August 2021 - Present (Expected: May 2026)
CGPA: 3.93 (out of 4.00)

BSc in Computer Science and Engineering
University of Dhaka
January 2016 - January 2020
CGPA: 3.55 (out of 4.00)

PUBLICATIONS

- Khan, M. M., & Yu, Z. (2024). Approaching Code Search for Python as a Translation Retrieval Problem with Dual Encoders. *Empirical Software Engineering*, 30(1), 1-28. DOI: 10.1007/s10664-w024-10580-3
- Khan et al. Efficient Story Point Estimation With Comparative Learning. arXiv preprint arXiv:2507.14642 (2025).

WORK EXPERIENCE

- **Intern** **June 2024 - August 2024**
  ABB
  Mannheim, Germany
  – Developed an end-to-end Named Entity Recognition (NER) pipeline to serve as an internal tool for engineers. Used traditional NLP methods, ML models, deep learning models and LLMs.
  – Final NER model showed an improvement in F-1 score of **0.36** over the initial NER model.
  – Used various tools including PyTorch, spaCy, scikit-learn, Hugging Face, MLflow.
  – Conducted under the supervision of Nika Strem as part of the **DAAD RISE Professional Program 2024**.

- **Graduate Research Assistant** **Fall 2021 - Fall 2023, Fall 2024, Fall 2025**
  Lab of Human-In-the-Loop Software Engineering
  Rochester Institute of Technology
  Supervisor: Dr. Zhe Yu
  – Conducted research on **code search** and published in **EMSE**, using NLP and ML tools to retrieve most relevant code snippet based on text query. The proposed showed an average improvement of **10.03%** over state-of-the-art methods in terms of MRR scores.
  – Conducted research on **comparative learning**, using NLP and ML tools for agile story point estimation, showing an average increase of **21.84%** in Spearmans rank correlation coefficient scores.
  – Conducted human subject experiments to support comparative learning research.
  – Also explored research topics involving explainable AI and image classification.
  – Served as **Graduate mentor** for **REU Site: Trustworthy AI Workshop 2025**.
  – Mentored Masters students on thesis projects.

- **Graduate Teaching Assistant**
  Rochester Institute of Technology
  ◦ **IDAI-710: Fundamentals of Machine Learning**
  Spring 2025, Spring 2026
  Instructor: Dr. James Heard
  ◦ **IDAI-720: Research Methods for Artificial Intelligence**
  Spring 2024
  Instructors: Dr. Zhe Yu & Dr. Esa Rantanen

TECHNICAL STRENGTHS

Programming languages	Python, Java, R, C, C++, JavaScript
Machine Learning & AI	TensorFlow, Keras, PyTorch, scikit-learn, LLM fine-tuning, RAG
MLOps & Data Engineering	MLflow, Airflow, PySpark, Docker
Frameworks & Databases	Flask, Spring, Angular, SQL (Oracle, SQLite), NoSQL (MongoDB)
Tools & Methodologies	Git (GitHub, Azure DevOps), LaTeX, Agile, Scrum

Signature