

Daking Rai

Fairfax, Virginia, USA

✉ drai2@gmu.edu | 🏠 <https://dakingrai.github.io/> | 💻 <https://github.com/Dakingrai> | 🔗 <https://www.linkedin.com/in/daking-rai-901593112/>

Research Interests

My research interest lies in the interpretability of neural networks and its practical usage. Although neural networks exhibit remarkable performance across a broad spectrum of tasks, their inherent opaqueness poses a significant challenge. This motivates my research to investigate the inner workings of neural networks through mechanistic interpretability, a subfield of interpretability that attempts to understand neural networks by reverse engineering them.

Education

George Mason University

Fairfax, VA

Ph.D. student in Computer Science

Aug 2021 – Aug 2026 (Expected)

- **Relevant Courses:** Machine Learning, Theory/Application Data Mining, Advanced NLP, Analysis of Algorithms, Software Testing, Computer Communication and Networking, Database Systems, , Research Methodologies in CS.

Tribhuvan University

Kathmandu, Nepal

Bachelors in Computer Science and Information Technology

Aug. 2012 – Aug. 2016

- Awarded "Outstanding Student of the Batch 2012" Award

Publications

CONFERENCE PAPERS

Explaining Large Language Model-Based Neural Semantic Parsers (Student Abstract)

Daking Rai, Yilun Zhou, Bailin Wang, Ziyu Yao

Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing, 2021, Online and Punta Cana, Dominican Republic

Work Experience

Graduate Research Assistant

Fairfax, VA, USA

George Mason University NLP Lab

May 2022 - Present

- Advisor(s): Prof. Ziyu Yao
- Broad research on interpretability and explanation of neural networks.

Graduate Teaching Assistant

Fairfax, VA, USA

George Mason University

Aug 2021 - April 2022

- Teaching Assistant for Computer Systems and System Programming (CS531)
- Teaching Assistant for Essentials of Computer Science (CS110)

Artificial Intelligence Engineer

Fairfax, VA, USA

Infodev Pvt Ltd

April 2019 - June 2020

- Led computer vision team as a lead engineer.
- Worked on face recognition and aliveness detection as a prototype to replace biometric attendance system.
- Worked on a prototype for Object detection and localization for the application of product recognition.
- Worked on integrating semantic search with Named Entity Recognizer (NER) and Customer review sentiment analysis for an e-commerce website.

Lecturer/Instructor

Kathmandu, Nepal

Islington College

Oct 2018 – Feb 2019

- Taught classes on "The Introduction to Artificial Intelligence" course for 70+ undergraduate students.

Executive Committee Member / Tech Lead

Lalitpur, Nepal

Rose Foundation Nepal

Oct 2016 – Mar 2018

- Organized annual event called "Walkathon – Together For Hope" where more than 1500 people participated.
- Initiated and executed the airing of radio program in Kantipur FM called cancer clinic.
- Initiated and organized two editions of 'Shivangi's Night For Charity', a musical event fundraiser, which raised more than NPR 12,00,000 and supported 12 underprivileged children battling cancer at Kanti Childrens Hospital.

Volunteers

- Volunteer for "The 10th annual Mid-Atlantic Student Colloquium on Speech, Language and Learning".
- Volunteer for "The third ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization (EAAMO '23)".
- Executive committee member (volunteer) for Rose Foundation Nepal, an NGO working to raise awareness about different types of cancers, especially breast cancer in Nepal.
- Organizer and mentor on 10+ machine learning and deep learning workshops conducted by AI Developer Nepal, an AI community based in Kathmandu.

Awards

- Graduate Student Travel Fund for ACL 23.

- Honorary mention in poster session of GMU CS Research Symposium.
- “Outstanding Student of the Batch 2012” Award. Tribhuvan University, Kathmandu Aug. 2016 Bachelors in Computer Science and Information Technology.

Languages

English Professional proficiency

Nepali Native proficiency

References

Ziyu Yao (ziyuyao@gmu.edu)

Assistant Professor
Dept. of Computer Science (CS)
George Mason University
4400 University Dr, Fairfax, VA 22030