



Ruchira Dhar

Nationality: Indian

Gender: Female

CONTACT

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ABOUT ME

Doctoral Researcher in NLP, AI and Cognition.

WORK EXPERIENCE

04/09/2023 – CURRENT Copenhagen, Denmark

● **Doctoral Researcher (CS/NLP/AI)** University of Copenhagen

1. Conducting advanced research on Neural Networks and Large Language Models (LLMs) to elucidate cognitive capabilities like reasoning, planning etc.
2. Additionally, I am interested in investigating neural alignment in natural & artificial systems via techniques in NeuroAI and computational neuroscience.
3. My research also involves interdisciplinary formal scientific analyses to determine the core properties of AI systems.

09/02/2022 – 30/06/2023 Helsinki, Finland

● **Analytical Linguist (AI Team)** Flowrite Oy

1. Working with SOTA LLMs including analytical prompting methods, in-context learning, and fine-tuning.
2. Research-based evaluation of NLG outputs using insights from psycholinguistics, automated metrics, and human evaluation.
3. Working with different Deep Learning and Machine Learning Algorithms for the preprocessing and postprocessing of NLG Outputs

10/05/2021 – 05/02/2022 Pune, India

● **Speech Expert (NLG Team)** Cerence Inc

1. Performed development of speech and text-based NLG pipelines for over 21 languages
2. Developed expertise in heuristics NLG methodologies and mastered working with over 10 internal tools in a short span.
3. Established work processes for cross-linguistic work with native speakers across the globe.

04/01/2021 – 06/05/2021 Hyderabad, India

● **Associate Engineer (NLP Analyst)** Kore AI

1. Ideation, development, and deployment of chatbots for US-based clients of different industries.
2. Gained skills in dialogue development, conversational analysis, ontology creation, and applying the latest technology to practical business requirements.
3. Researched and implemented parts of the NLG pipeline like intent recognition, ontology development, and pos-tagging using libraries like NLTK and Spacy.

19/09/2020 – 11/12/2020 Delhi, India

● **Junior Research Fellow (Linguistics)** Indian Institute of Technology Delhi

1. Worked with peer researchers in developing better insights into annotation techniques
2. Attended classes and assisted professors in the areas of computational linguistics & psycholinguistics

EDUCATION AND TRAINING

04/09/2023 – CURRENT Copenhagen, Denmark

PhD in Computer Science (Ongoing) University of Copenhagen

Website <https://coastalcph.github.io/>

01/08/2018 – 29/06/2020 Hyderabad, India

MA in Linguistics The English and Foreign Languages University

Address Tarnaka, 500007, Hyderabad, India | **Website** <https://www.efluniversity.ac.in/> | **Field of study** Arts and humanities

| **Final grade** Outstanding | **Thesis** Thesis: "Navigating Truth Value Gaps: A Function Alteration Approach to The Analysis of Nominal Modification". Area- Mathematical Linguistics and Semantics. Supervisor- Dr Utpal Lahiri (Assoc. Professor, EFLU & PhD, MIT).

CONFERENCES AND SEMINARS

12/11/2024 – 16/11/2024 Miami, Florida

EMNLP (Empirical Methods in Natural Language Processing), 2024

Work with co-author Constanza Fierro, titled " **Defining Knowledge: Bridging Epistemology and Large Language Models**", was accepted to the main EMNLP conference in 2024.

21/07/2024 – 27/07/2024 Vienna, Austria

LLM & Cognition Workshop, ICML (International Conference on Machine Learning) 2024

My work titled "From Words to Worlds: Compositionality For Cognitive Architectures" was accepted to ICML (International Conference on Machine Learning) Workshop on LLM & Cognition. It is undergoing final camera-ready preparations.

Link <https://llm-cognition.github.io/>

16/05/2024 – 17/05/2024 Gottingen, Germany

Agency and Intentions in AI (AIAI) Workshop, 2024

My abstract on ongoing research in Compositionality in LLMs was accepted via peer review and I was invited for a talk at the workshop.

Link <https://aii-workshop.github.io/aiai-conference/index.html>

HONOURS AND AWARDS

08/01/2020 University Grants Commission, Government of India

Junior Research Fellowship in Linguistics

Received 99 percentile score in national-level examination in Linguistics for prestigious research grant. Qualification in the exam also makes one eligible for posts of Assistant Professor in all government-recognized institutes across India.

Link https://drive.google.com/drive/folders/1TOospBxSe4rrX6p61Pu1fnrT7BvmHQNT?usp=share_link

VOLUNTEERING

A1* Conference Peer Review

I have served as invited reviewer for workshops at ICML (International Conference on Machine Learning), 2024 and NeurIPS (Neural Information Processing Systems), 2024

01/04/2017 – 01/12/2017 Leiden University, Netherlands (Remote)

Online Forum Volunteer (Linguistics Course on Coursera)

Mentoring learners and regulating them on the MOOC 'Miracles of Human Language' by Leiden University on Coursera.

LANGUAGE SKILLS

MOTHER TONGUE(S): Bengali

Other language(s):

English

- Listening** C2
- Spoken production** C2
- Reading** C2
- Spoken interaction** C2
- Writing** C2

Hindi

- Listening** C1
- Spoken production** C2
- Reading** B2
- Spoken interaction** C2
- Writing** B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Large Language Models (LLM) | Machine Learning & Deep Learning | Python | R | SQL | HTML | Git & Github