

Ruchira Dhar

Date of birth: 19/12/1997

Nationality: Indian

CONTACT

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ABOUT ME

Doctoral Researcher in NLP, Al 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 Al systems.

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

Analytical Linguist (Al 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 Al

- 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).

01/07/2015 - 28/06/2018 Kolkata. India

BA in English Language & Literature (with Honours) University of Calcutta

Website https://www.caluniv.ac.in/

CONFERENCES AND SEMINARS

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

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://ail-workshop.github.io/aiai-conference/index.html

29/10/2019 - 31/10/2019 INALCO, Paris, France

South Asian Languages Analysis Roundtable (SALA)

Presented a paper at the conference titled "The Bangla Sprachraum: Dialect Continuum from West Bengal to Assam via Bangladesh"

Links https://sala-35.sciencesconf.org/ https://drive.google.com/file/d/1Nwx0BQCMdrP8Y5vyAgMqBObuUgYx5uTv/view?usp=share_link

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

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

PROGRAMMING

Python | R | SQL | HTML

NLP

Pandas | Spacy | Machine Learning Basics | Tensorflow | Scikit-Learn