



PERSONAL DETAILS

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EDUCATION

PhD (Thesis Submitted)

Jadavpur University
2023

M.E. (Computer Science)

Jadavpur University
2016

B.E. (Computer Science)

Jadavpur University
2014

Subhabrata Dutta

**Senior Research Associate
IIT Delhi**

Primarily, working on emergent properties of Large Language Models focused on Reasoning, Prompt engineering, and Mechanistic interpretation. Also, have prior experience working on Social data mining and Graph representation learning.

RESEARCH EXPERIENCE

**Senior Research Associate
IIT Delhi**

2022 -

Project title: **"Separating the what from the how in Pretrained Language Models: A step towards generic AI"**

Funded by: Defence Research and Development Organisation (DRDO), Ministry of Defense, Govt, of India.

Project title: **"Exploring the roles of Network Topology, Temporal Online Interactions, and Downstream Tasks in Graph Representation"**

Funded by: Meta, Inc.

Project title: **"Mixed context learning with LLMs under Low-resource setting"**

Funded by: Adobe Research, India

Junior Research Fellow

2021 - 2022

Jadavpur University

Project title: **"Claim Detection and Verification using Deep NLP: an Indian Perspective"**

Funded by: Defence Research and Development Organisation (DRDO), Ministry of Defense, Govt, of India.

Junior Research Fellow

2018 - 2021

Jadavpur University

West Bengal State Government Fellowship

SELECTED PUBLICATIONS

Please check Google Scholar for an exhaustive list of publications.

Gurusha Juneja*, Subhabrata Dutta*, Soumen Chakraborty, Sunny Manchanda, and Tanmoy Chakraborty. **Small Language Models Fine-tuned to Coordinate Larger Language Models improve Complex Reasoning.** (To appear at EMNLP 2023)

Eshaan Tanwar*, Subhabrata Dutta*, Manish Borthakur, and Tanmoy Chakraborty. **Multilingual LLMs are Better Cross-lingual In-context Learners with Alignment.** Annual Meeting of the Association for Computational Linguistics (ACL Outstanding paper), 2023.

Vasu Goel*, Dhruv Sahnani*, Subhabrata Dutta*, Anil Bandhakavi, and Tanmoy Chakraborty. **Hatemongers ride on echo chambers to escalate hate speech diffusion.** PNAS Nexus. 2023.

Subhabrata Dutta*, Jeevesh Juneja*, Dipankar Das, and Tanmoy Chakraborty. **Can Unsupervised Knowledge Transfer from Social Discussions Help Argument Mining?** Annual Meeting of the Association for Computational Linguistics (ACL), 2022.

Subhabrata Dutta, Samiya Caur, Soumen Chakrabarti, and Tanmoy Chakraborty. **Semi-supervised stance detection of tweets via distant network supervision.** ACM International Conference on Web Search and Data Mining (WSDM), 2022.

ACHIEVEMENTS

Outstanding paper award
ACL, 2023

Secured All India Ranking 16
GATE (2014)

Computer science and
engineering

Rank holder
Madhyamik Pariksha (2007)
West Bengal Board of
Secondary Education

HOBBIES

Chess

Painting

Reading

Subhabrata Dutta, Shravika Mittal, Dipankar Das, Soumen Chakrabarti, and Tanmoy Chakraborty. **Incomplete Gamma Integrals for Deep Cascade Prediction using Content, Network, and Exogenous Signals**. IEEE Transactions on Knowledge and Data Engineering (TKDE). 2022.

Subhabrata Dutta, Tanya Gautam, Soumen Chakrabarti, Tanmoy Chakraborty. **Redesigning the Transformer Architecture with Insights from Multi-particle Dynamical Systems**. Advances in Neural Information Processing Systems (NeurIPS Spotlight), 2021.

Subhabrata Dutta, Sarah Masud, Soumen Chakrabarti, Tanmoy Chakraborty. **Deep Exogenous and Endogenous Influence Combination for Social Chatter Intensity Prediction**, ACM SIGKDD Conference on Knowledge Discovery and Data Mining, 2020.

Subhabrata Dutta, Dipankar Das, Tanmoy Chakraborty. **Modelling Engagement Dynamics of Online Discussions using Relativistic Gravitational Theory**, 19th IEEE International Conference on Data Mining (ICDM), 2019.

*Equal contribution.

TEACHING EXPERIENCE

Guest Faculty

Jadavpur University, Kolkata

Taught Module titled 'C programming and data structure'

2018 - 2019

Guest Faculty

Jadavpur University, Kolkata

Taught Module titled 'C programming and data structure'

2017 - 2018

Guest Faculty

Jadavpur University, Kolkata

Taught Module titled 'Computer graphics'

2017 - 2018

Guest Faculty

RCCIT, Kolkata

Taught Module titled 'Advanced data structures and algorithms'

2017 - 2018

Guest Faculty

Aliah University, Kolkata

Taught Module titled 'Natural language processing'

2017 - 2018

REFERENCES

Dr. Tanmoy Chakraborty
Prof. Soumen Chakrabarti

Associate Professor, IIT Delhi
Professor, IIT Bombay

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