

Suman Adhya

PhD Scholar at SMCS in IACS

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i Short Bio

I am a Ph.D. candidate at the School of Mathematical & Computational Sciences (SMCS), IACS, with a specialization in topic modeling for NLP. My research focuses on enhancing the quality of topic representations, improving interpretability, and increasing the efficiency of topic models, with publications in venues such as ACL 2025, NAACL 2024, EACL 2023, ECIR 2023, and IEEE Transactions on Artificial Intelligence. I will submit my doctoral thesis for review in August 2025 and am seeking a full-time research position in either academia or industry.

Education

Ongoing Oct 2020S	Indian Association for the Cultivation of Science Ph.D. from the School of Mathematical & Computational Sciences (SMCS)	Kolkata, India
Jul 2020 Aug 2018	Indian Association for the Cultivation of Science M.Sc. in Mathematics & Computing from SMCS	Kolkata, India
2018 2015	Serampore College, University of Calcutta B.Sc.(Hons.) in Mathematics	Kolkata, India

Publications








J=Journal, C=Conference, W=Workshop, P=Preprint

- [P] **DTECT: Dynamic Topic Explorer & Context Tracker** [🔗]
Suman Adhya and Debarshi Kumar Sanyal
[Code](#) / [Demo](#) / [Video](#) [arXiv]
- [C] **S2WTM: Spherical Sliced-Wasserstein Autoencoder for Topic Modeling** [🔗]
Suman Adhya and Debarshi Kumar Sanyal
Association for Computational Linguistics, Vienna, Austria [ACL'25]
- [J] **Evaluating Negative Sampling Approaches for Neural Topic Models** [🔗]
Suman Adhya, Avishek Lahiri, Debarshi Kumar Sanyal, and Partha Pratim Das
IEEE Transactions on Artificial Intelligence [IEEE-TAI]
- [C] **GINopic: Topic Modeling with Graph Isomorphism Network** [🔗]
Suman Adhya and Debarshi Kumar Sanyal
North American Chapter of the Association for Computational Linguistics, Mexico City, Mexico [NAACL'24]
- [C] **Do Neural Topic Models Really Need Dropout? Analysis of the Effect of Dropout in Topic Modeling** [🔗]
Suman Adhya, Avishek Lahiri, and Debarshi Kumar Sanyal
17th European Chapter of the Association for Computational Linguistics, Dubrovnik, Croatia [EACL'23]
- [C] **Improving Neural Topic Models with Wasserstein Knowledge Distillation** [🔗]
Suman Adhya and Debarshi Kumar Sanyal
45th European Conference on Information Retrieval, Dublin, Ireland [ECIR'23]
- [C] **Improving Contextualized Topic Models with Negative Sampling** [🔗]
Suman Adhya, Avishek Lahiri, Debarshi Kumar Sanyal, and Partha Pratim Das
19th International Conference on Natural Language Processing, New Delhi, India [ICON'22]
- [W] **What Does the Indian Parliament Discuss? An Exploratory Analysis of the Question Hour in the Lok Sabha** [🔗]
Suman Adhya and Debarshi Kumar Sanyal
1st Workshop on Natural Language Processing for Political Sciences, LREC, Marseille, France [PoliticalNLP @ LREC'22]


Skills


Research Interests	Natural Language Processing (NLP); Topic Modeling; Interactive and Interpretable NLP Systems; Geometry-aware Learning; Knowledge Distillation; Negative Sampling; Optimal Transport; Graph Neural Networks
Technical Expertise	Python; PyTorch; PyG; DGL; TensorFlow; Git


Presentations


> PIC 2025, Lighting Talk and Poster Presentation 	Feb 2025 (Mysore, India)
> NAACL 2024, Poster Presentation 	June 2024 (Virtual)
> PIC 2024, Poster Presentation 	Feb 2024 (Mysore, India)
> EACL 2023, Poster Presentation 	May 2023 (Dubrovnik, Croatia)
> ECIR 2023, Short Paper Presentation 	March 2023 (Virtual)
> ICON 2022, Full Paper Presentation 	December 2022 (IIIT-Delhi, India)
> PoliticalNLP @ LREC 2022, Poster Presentation 	June 2022 (Virtual)


Travel Grants and Awards


ACM India-IARCS Travel Grant, 2025  : Awarded for presenting our paper at ACL'25 held in Vienna, Austria.


ANRF-International Travel Support, 2025  : Awarded for presenting our paper at ACL'25 held in Vienna, Austria.

ACM India Research Facilitation Grant, 2025  : Awarded to cover the extra page charges of our paper at IEEE-TAI.

Microsoft Research Travel Grant, 2024  : Awarded for presenting our paper at NAACL'24 held in Mexico City, Mexico.

ACM India-IARCS Travel Grant, 2024  : Awarded for presenting our paper at NAACL'24 held in Mexico City, Mexico.












Microsoft Research Travel Grant, 2023  : Awarded for presenting our paper at EACL'23 held in Dubrovnik, Croatia.

The INSPIRE-SHE Award, DST, 2015-2018  : Awarded for securing a top 1% rank in Class 12th examinations.

Teaching Assistant

Introduction to Machine Learning [PHD 226/ COM 4203], IACS	January - June, 2024
> Responsibilities included setting and evaluating assignments.	
Laboratory - Numerical methods (PHS 4211), IACS	January - June, 2021
> Responsibilities included setting and evaluating lab assignments.	

Academic Responsibility

Volunteer coordinator	EACL'23 
Review committee member	ARR - Feb'25  , EMNLP'24 Industry Track  , ARR - June'24  , ARR - April'24  , ARR - February'24  , ACL'23  , EMNLP'22 
Program committee member	PoliticalNLP'24  , EMNLP'23 Industry Track  , PoliticalNLP'22 

Social Responsibility

Student representative at the anti-ragging cell in IACS	2023 - Current
Research and technical assistant at Research Scholars' Association in IACS	2023-2024
System manager at Research Scholars' Association in IACS	2022-2023

References

References will be provided on request.