Suman Adhya

PhD Scholar at SMCS in IACS

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ⓘ Short Bio

I am a final-year Ph.D. student at SMCS in IACS, under the supervision of Dr. Debarshi Kumar Sanyal. My research focuses on Natural Language Processing (NLP), particularly on topic models. These models are unsupervised techniques used to extract underlying themes or topics from collections of documents.

🏛 Education

Oct 2020 **Sep 2025***	**Indian Association for the Cultivation of Science** Ph.D. from the School of Mathematical & Computational Sciences (SMCS)	**Kolkata, India**
Aug 2018 **Jul 2020**	**Indian Association for the Cultivation of Science** M.Sc. in Mathematics & Computing from SMCS	**Kolkata, India**
2015 **2018**	**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

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Research Interests	NLP - Topic Modeling, Machine Learning - Variational Inference, Information Theory - Rate–Distortion Theory
Technical Expertise	Python, PyTorch and PyG, Deep Graph Library, 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.