

# Suman Adhya

## PhD Scholar at SMCS in IACS

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📍 IACS, Jadavpur, Kolkata-700032, West Bengal, India



## Short Bio

I am a Ph.D. candidate at the School of Mathematical & Computational Sciences (SMCS), IACS, specializing 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 AAAI 2026, ACL 2025, NAACL 2024, EACL 2023, ECIR 2023, and IEEE Transactions on Artificial Intelligence. I have submitted my doctoral thesis for review (September 2025) and am seeking a full-time research position.

## Education

Ongoing   Oct 2020	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

- [c] **DTECT: Dynamic Topic Explorer & Context Tracker** [[🔗](#)]  
Suman Adhya and Debarshi Kumar Sanyal  
[Code](#) | [Demo](#) | [Video](#) [AAAI'26 (Demonstration)]
- [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*  
*An extension of work initiated under the guidance of Prof. Partha Pratim Das (Ashoka University).* [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*  
*This work was initiated under the foundational guidance of Prof. Partha Pratim Das (IIT Kharagpur).* [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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<b>Programming Languages</b>	Python (Proficient), C, R (Familiar)
<b>Tools &amp; Frameworks</b>	PyTorch, TensorFlow, HuggingFace, LangChain, Scikit-learn, Pandas, Scipy, Gensim, Sentence-Transformers, PyTorch Geometric (PyG), FAISS, Streamlit
<b>Algorithms &amp; Methods</b>	Topic Modeling, Representation Learning, Knowledge Distillation, Negative Sampling, Optimal Transport, Graph Neural Networks (GNNs)

## Presentations

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> ACL 2025, Poster Presentation 	July 2025 (Vienna, Austria)
> 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

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- 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.
  - Travel Grant for EACL, 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

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<b>Introduction to Machine Learning [PHD 226/ COM 4203], IACS</b>	January - June, 2024
<b>Laboratory - Numerical Methods (PHS 4211), IACS</b>	January - June, 2021

## Academic Responsibility

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

## Community Service

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<b>Student Representative, Anti-Ragging Cell, IACS</b>	2023 - Current
<b>Research and Technical Assistant, Research Scholars' Association, IACS</b>	2023-2024
<b>System Manager, Research Scholars' Association, IACS</b>	2022-2023

## References

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References will be provided on request.