

SOUVIKA SARKAR

ASSISTANT PROFESSOR

CURRENT APPOINTMENT	Assistant Professor School of Computing Wichita State University, Kansas, United States	<i>Aug' 2024 - Present</i>
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EDUCATION	Auburn University Alabama, USA <i>Aug' 2019 - Jul' 2024</i> <i>Ph.D.</i> , Computer Science and Software Engineering Advisor: Prof. Shubhra Kanti Karmaker Thesis Committee: Prof. Anh Nguyen, Prof. Gerry Dozier, Prof. Asish Gupta Thesis Title: Zero-Shot Multi-Label Topic Inference
	Jadavpur University West Bengal, India <i>Jun' 2015 - Dec' 2018</i> <i>M.E.</i> , Software Engineering
	Maulana Abul Kalam Azad University of Technology West Bengal, India <i>Jun' 2007 - Jul' 2011</i> <i>B.Tech.</i> , Computer Science and Engineering

RESEARCH INTERESTS	Natural Language Processing, Generative AI, Information Retrieval, Intelligent Agents, Artificial Intelligence, Deep Learning
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AWARDS	[Hunger Free Kansas Mass action Grant] Sponsor: Kansas Leadership Center. Title: Leveraging AI for Food System Data Acquisition and Inquiry [Multidisciplinary Research Project Awards] Sponsor: Wichita State University. Title: Food System Data Acquisition to Support Real-Time Food Navigation using Large Language Models
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PUBLICATIONS	Conference Papers <ul style="list-style-type: none">EMNLP (2025) – John Salvador, Naman Bansal, Mousumi Akter, Souvika Sarkar, Anupam Das, Shubhra Kanti Karmaker Santu. <i>Benchmarking LLMs on the Semantic Overlap Summarization Task</i>. To appear.NAACL (2025) – Eftekhari Hossain, Souvika Sarkar, Shubhra Kanti Karmaker Santu. <i>LLMs as Meta-Reviewers' Assistants: A Case Study</i>. pp. 7763–7803.L@S (2024) – Effat Farhana, Souvika Sarkar, Rachael Knipper, Indrajit Dey, Hamsa Narayanan, Sadhana Puntambekar, et al. <i>SimPal: Meta-Conversational Framework to Understand Teacher Goals in K–12 Physics</i>. pp. 461–465.ICPE (2024) – Souvika Sarkar, Mohammad F. Babar, Md Mahadi Hassan, Monowar Hasan, Shubhra Kanti Karmaker Santu. <i>Processing Natural Language on Embedded Devices: How Well Do Transformer Models Perform?</i>EMNLP (2023) – Souvika Sarkar, Dongji Feng, Shubhra Kanti Karmaker Santu. <i>Zero-Shot Multi-Label Topic Inference with Sentence Encoders & LLMs</i>. pp. 16218–16233.
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- EMNLP (2023) – Mousumi Akter, **Souvika Sarkar**, Shubhra Kanti Karmaker Santu. *On Evaluation of Bangla Word Analogies*. pp. 13121–13127.
- ACL-IJCNLP (2022) – **Souvika Sarkar**, Dongji Feng, Shubhra Kanti Karmaker Santu. *Exploring Universal Sentence Encoders for Zero-shot Text Classification*. pp. 135–147.
- ICDATA (2021) – Biddut Bijoy, Syeda Saba, **Souvika Sarkar**, Md Islam, Sheikh Islam, Md Amin. *Containing COVID-19 Pandemic by Mining Knowledge from Scientific Literature and Social Media*.
- ACM IUI (2021) – Biddut Bijoy, Syeda Saba, **Souvika Sarkar**, Md Islam, Sheikh Islam, Md Amin. *COVID19^α: Spatio-Temporal Visualization of COVID-19 Symptoms via Tweets*. pp. 28–30.

Journal Papers

- ACM TIST (2023) – **Souvika Sarkar**, Biddut Bijoy, Syeda Saba, Dongji Feng, Yash Mahajan, Sheikh Islam, Md Amin, Shubhra Kanti Karmaker Santu. *Ad-Hoc Monitoring of COVID-19 Global Research Trends for Well-Informed Policy Making*. pp. 1–28.

Peer-Reviewed Workshop Papers

- NeurIPS Safe GenAI Workshop (2024) – Amit Das, Zheng Zhang, Najib Hasan, **Souvika Sarkar**, et al. *Investigating Annotator Bias in Large Language Models for Hate Speech Detection*.
- WWW UserNLP (2022) – **Souvika Sarkar**, Shubhra Kanti Karmaker Santu. *Concept Annotation from Users' Perspective: A New Challenge*. pp. 1180–1188.

arXiv Preprints

- arXiv (2025) – Md Najib Hasan, Md Fakhruddin Babar, **Souvika Sarkar**, et al. *Pitfalls of Evaluating Language Models with Open Benchmarks*.
- arXiv (2025) – Alex Knipper, Indrani Dey, **Souvika Sarkar**, et al. *Instructional Goal-Aligned Question Generation in Virtual Lab Settings*.
- arXiv (2025) – **Souvika Sarkar**, Md Najib Hasan, Shubhra Kanti Karmaker Santu. *Zero-Shot Multi-Label Classification of Bangla Documents: Large Decoders vs Classic Encoders*.
- arXiv (2025) – Blessing Airehenbuwa, Touseef Hasan, **Souvika Sarkar**, Ujjwal Guin. *Advancing Security with Digital Twins: A Survey*.
- arXiv (2025) – Amit Das, **Souvika Sarkar**, et al. *Investigating Hallucination in Conversations for Low Resource Languages*.
- arXiv (2024) – **Souvika Sarkar**, Md Fakhruddin Babar, Md Hasan, Shubhra Kanti Karmaker Santu. *LLMs as On-Demand Customizable Service*.

TEACHING EXPERIENCE

Assistant Professor

Wichita State University

Aug' 2024 - Present

- Natural Language Processing (Graduate)
- Information Retrieval (Graduate)
- Artificial Intelligence (Graduate)
- Data Structure (Undergrad)

Teaching Assistant

Auburn University

Aug' 2019 - Jul' 2024

- Personal Computer Applications
- Fundamentals of Computing II
- Advanced Computer and Network Security
- Natural Language Processing
- Information Retrieval
- Machine Learning
- Explainable Artificial Intelligence
- Computational Biology

INDUSTRY EXPERIENCE

IT Analyst (Client: Kingfisher)

Tata Consultancy Services

May' 2018 - Jul' 2019

- Involved in installation and configuration of the Microsoft Office SharePoint Server 2010/2013 farms and service applications through PowerShell.
- Migrated SharePoint 2013 to Office 365.
- Applying hot fixes, updates and Service Packs.
- Deploying and upgrading apps through PowerShell and SharePoint UI. Building servers to support SharePoint.
- Managing content deployment settings and maintaining its path and jobs from authoring site collection to prod site collection.
- Creating forms and workflows in SharePoint Designer 2010/2013.

IT Analyst (Client: KPMG)

Tata Consultancy Services

Oct' 2017 - Apr' 2018

- Testing SharePoint applications including script preparation and execution.
- Logging defects in ALM QC tool for proper traction by product teams. Updating these bugs on regular basis based on the deployment outcomes.

IT Analyst (Client: KPMG)

Tata Consultancy Services

May' 2012 - Sep' 2017

- Installation and configuration of the Microsoft Office SharePoint Server 2007/2013 farms and service applications.
- Consult with client's Business Units and IT users on a regular basis to understand the requirements, preparing run books/deployment strategies, identifying solutions for critical bugs.
- Production deployment and bug fixing, developing programs/packages as per requirements specified by the clients to ensure that the client requirements are fulfilled.
- Migration of SharePoint 2007 to SharePoint 2013.
- Solving application related issues in production environment and documenting them for future references.
- Monitoring of various services along with server health and performance analysis. Preparation of reports based on these analyses and sharing the same with clients on regular basis.

TECHNICAL SKILLS

Languages: Python, C, C++, JAVA, R, L^AT_EX

Libraries: PyTorch, TensorFlow, scikit, Keras, numpy

ACHIEVEMENTS	<p>Recipient of Auburn University's Outstanding Doctoral Student Award.</p> <p>Recipient of 100+ Women Strong Outstanding Departmental Annual Graduate Award for 2023 from the Samuel Ginn College of Engineering at Auburn University.</p> <p>Featured on Samuel Ginn College of Engineering at Auburn University news for or publication in the journal Transactions on Intelligent Systems and Technology, a highly prestigious journal in the field of artificial intelligence with an impact factor of 10.489.</p> <p>Attained the runner-up position in the inter-district Yoga competition.</p> <p>Awarded Star of the Month twice for developing many custom code on client's requirement in KPMG Project and completing critical deployments without error.</p> <p>Received Service Commitment award for completing 5 years in Tata Consultancy Services.</p> <p>Ranked 1st in the ME Entrance exam held at Jadavpur University.</p> <p>Recipient TCS sponsorship to pursue M.E in Software Engineering from Jadavpur University.</p> <p>Recipient of certificate of merit and scholarships at school for procuring 1st position in XII Exams.</p> <p>Achieved a state-level ranking as a Gymnast and have also represented state at the national level.</p>
CERTIFICATIONS	<p>Microsoft® Certified Solutions Associate - 2016</p> <p>Microsoft® Specialist: Programming in HTML5 with JavaScript and CSS3 - 2014</p> <p>Microsoft® Certified Solutions Developer: SharePoint Applications - 2014</p> <p>Microsoft® Certified Professional - 2014</p>
COMMUNITY CONTRIBUTIONS	<p>Demonstrating a strong commitment to promoting diversity, equity, and inclusion, contributed to the establishment of the Bengali Student Association at Auburn University and currently serve as the inaugural President of the organization.</p>
REFERENCES	<p>Reference information will be provided upon request.</p>