Sayan Ghosh

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Education

The University of North Carolina at Chapel Hill   **Chapel Hill, NC, USA**
Ph.D. in Computer Science   *Fall 2019–Present*
Research Area : Natural Language Processing
Advisor : Prof. Shashank Srivastava

Indian Institute of Technology Kharagpur   **Kharagpur, India**
B.Tech (Hons.) in Computer Science and Engineering   *2014–2018*
CGPA 9.54/10.0

Publications

○ **Leveraging Multiple Teachers for Test-Time Adaptation of Language-Guided Classifiers**
[paper link]
Kangda Wei, Sayan Ghosh, Rakesh R Menon, Shashank Srivastava
Findings of EMNLP 2023

○ **Pragmatic Reasoning Unlocks Quantifier Semantics for Foundation Models**
[paper link]
Yiyuan Li, Rakesh R Menon, Sayan Ghosh, Shashank Srivastava
EMNLP 2023

○ **Beyond Labels: Empowering Human Annotators with Natural Language Explanations through a Novel Active-Learning Architecture**
[paper link]
B Yao, I Jindal, L Popa, Y Katsis, Sayan Ghosh, L He, Y Lu, S Srivastava, Y Li, J Hendler, D Wang
Findings of EMNLP 2023

○ **LaSQuE: Improved Zero-Shot Classification from Explanations Through Quantifier Modeling and Curriculum Learning**
[paper link]
Sayan Ghosh*, Rakesh R Menon*, and Shashank Srivastava
Findings of ACL 2023

○ **Beyond the Imitation Game: Quantifying and extrapolating the capabilities of language models**
[paper link]
Srivastava et al. - Contributed a task in BigBench
TMLR 2023

○ **CLUES: A Benchmark for Learning Classifiers using Natural Language Explanations**
[paper link]
Rakesh R Menon*, Sayan Ghosh* and Shashank Srivastava
ACL 2022

○ **ePiC: Employing Proverbs in Context as a Benchmark for Abstract Language Understanding**
[paper link]
Sayan Ghosh and Shashank Srivastava
ACL 2022

○ **Compositional Generalization for Kinship Prediction through Data Augmentation**
[paper link]
Kangda Wei, Sayan Ghosh and Shashank Srivastava
Workshop of Narrative Understanding (WNU2022) co-located with ACL 2022

○ **Mapping Language to Programs using Multiple Reward Components with Inverse Reinforcement Learning**
[paper link]

Sayan Ghosh and Shashank Srivastava
Findings of EMNLP 2021

○ **Adversarial Scrubbing of Demographic Information for Text Classification**
[paper link]
Somnath Basu Roy Chowdhury, Sayan Ghosh, Yiyuan Li, Junier Oliva, Shashank Srivastava and Snigdha Chaturvedi
EMNLP 2021

○ **How Helpful is Inverse Reinforcement Learning for Table-to-Text Generation?**
[paper link]
Sayan Ghosh*, Zheng Qi*, Snigdha Chaturvedi, Shashank Srivastava
ACL 2021

○ **PRover: Proof Generation for Interpretable Reasoning over Rules**
[paper link]
Swarnadeep Saha, Sayan Ghosh, Shashank Srivastava, and Mohit Bansal
EMNLP 2020

○ **Analysing the Extent of Misinformation in Cancer Related Tweets**
[paper link]
Rakesh Bal, Sayan Sinha, Swastika Dutta, Rishabh Joshi, Sayan Ghosh, Ritam Dutt
ICWSM 2020

○ **Exploring Color Variations for Vector Graphics**
[paper link]
Sayan Ghosh, Jose Echevarria, Vineet Batra, Ankit Phogat
SIGGRAPH 2019 (Poster)

○ **DeepTagRec: A Content-cum-User based Tag Recommendation Framework for Stack Overflow**
[paper link]
Suman Kalyan Maity, Abhishek Panigrahi, Sayan Ghosh, Arundhati Banerjee, Pawan Goyal and Animesh Mukherjee
ECIR 2019

○ **Public Sphere 2.0: Targeted Commenting in Online News Media**
[paper link]
Ankan Mullick, Sayan Ghosh, Ritam Dutt, Avijit Ghosh and Abhijnan Chakraborty
ECIR 2019
Won best poster presentation award

○ **QoS-Aware Dynamic Caching for Destroyed Virtual Machines in Sensor-Cloud Architecture.**
[paper link]
Arijit Roy, Sudip Misra and Sayan Ghosh
ICDCN 2018

○ **Mining Twitter and Taxi Data for Predicting Taxi Pickup Hotspots.**
[paper link]
Sankarshan Mridha, Sayan Ghosh, Robin Singh, Sourangshu Bhattacharya and Niloy Ganguly
ASONAM 2017

Patents

○ **Weighted Color Palette Generation**
Ankit Phogat, Sayan Ghosh, Vineet Batra
Application US16/685,589 (Filed Nov 2019)

○ **Flow-Based Color Transfer from Source Graphic to Target Graphic**
Ankit Phogat, Sayan Ghosh, Vineet Batra, Stephen DiVerdi, Scott Cohen
Application US16/533,308 (Filed Aug 2019)

Experience

Amazon AWS AI   **Santa Clara**
Applied Scientist Intern   *May 2023 - August 2023*
Mentors: Xibin Gao, Elman Mansimov, Saab Mansour
Worked as a research intern in AWS Lex on leveraging supervision from LLMs for developing dialog agents

IBM Research Almaden   **San Jose**
Research Intern   *May 2022 - August 2022*
Mentors: Ishan Jindal, Lucian Popa, Huaiyu Zhu, Prithviraj Sen
Worked as a research intern in the Scalable Knowledge Intelligence team

Bloomberg LP   **New York (remotely from Chapel Hill)**
Research Intern   *May 2021 - August 2021*
Mentors: John Doucette and Philipp Meerkamp
Worked as a research intern in the AI Communications team

UNC-NLP   **Chapel Hill**
Graduate Research Assistant   *August 2019 - Present*
Currently working on learning from natural language explanations. Previously worked on language grounding, summarization from knowledge bases, and developing interpretable QA systems

Adobe Inc.   **Noida, India**
Member of Technical Staff, Adobe Illustrator   *July 2018 - July 2019*
I was part of Adobe Illustrator team in Adobe Inc. (formerly known as Adobe Systems Pvt. Ltd.) I was involved in research and development projects involving computer vision and vector graphics.

Adobe Research, BigData Experience Labs   **Bangalore, India**
Research Intern   *Summer 2017*
Guide: Iftikhar Ahamath Burhanuddin and Prakhar Gupta
Topic: Conversational Agents for Enterprise

National Digital Library of India   **IIT Kharagpur, India**
Summer Intern   *Summer 2016*
Guide: Prof. Sudeshna Sarkar and Prof. Partha Pratim Das
Topic: OCR correction on Bengali documents

ISI Cryptology Summer Internship   **ISI Kolkata, India**
Research Intern   *Summer 2015*
Guide: Prof. Bimal K. Roy
Topic: Multiple Threshold Secret Sharing

Academic Achievements

- Finalist of Adobe Research Fellowship 2022
- Won best poster presentation award at ECIR 2019.
- Recipient of Jagadish Bose National Science Talent Search (JBNSTS) Scholarship Award 2014.
- Recipient of Jawaharlal Nehru Scholarship-2014 for outstanding result in CBSE-AISSCE and Joint Entrance Examinations.
- Received Governor's Award for good performance in Higher Secondary Exam
- Secured AIR 1038 in JEE Advanced-2014, AIR 270 in JEE Main-2014 and 8th rank in WBJEE-2014
- Recipient of Kishore Vaigyanik Protsahan Yojana fellowship in SX stream (2013-14) by securing rank 171
- Placed in National Top 1% and qualified for Indian National Chemistry Olympiad and Indian National Astronomy Olympiad.

Professional Services/Activities

- **Reviewer :** EMNLP 2020, AAAI 2021, EACL 2021, NAACL 2021, ACL 2021, EMNLP 2021, ACL Rolling Review (ARR) 2021 onwards (includes ACL/NAACL/EMNLP 2022 & 2023), WNU 2022 (co-located w/ ACL 2022), DaSH 2022 (will be co-located with EMNLP 2022)
- **Volunteer :** ACL 2020