

SOMNATH BASU ROY CHOWDHURY

Residential Information

Carrboro, NC
Chapel Hill 27516, US.

Electronic Information

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Research Interests

Representation Learning for text, Fairness in NLP and Information-Theoretic evaluation metrics.

Education

University of North Carolina (UNC) at Chapel Hill

Jan 2021 - present

Ph.D. in Computer Science

Advisor: Prof. [Snigdha Chaturvedi](#)

Indian Institute of Technology (IIT) - Kharagpur, India

2013 - 2018

B.Tech. & M.Tech. (Dual Degree Hons.) in Electrical Engineering

Rank - 3/31

Minor in Computer Science & Engineering (CSE)

Micro-specialization in Embedded Wireless Systems (EWS)

Advisor: Prof. [Jayanta Mukhopadhyay](#)

Work Experience

Microsoft Corporation

Jul 2019 - Dec 2020

Data Scientist II, Satori Knowledge Graph (Bing team)

Apple Inc.

Jun 2018 - Jul 2019

Software Engineer, Identity Management Services (IdMS).

Publications

Google Scholar: [xGbyrIUAAAAJ](#). (Note: Most computer science researchers publish more in conferences than journals. Conferences are considered equally or more prestigious than journals, all conferences below including short papers have an acceptance rate < 25%.)

Pre-prints:

- [11] **Learning Fair Representations via Rate-Distortion Maximization**

S. Basu Roy Chowdhury and S. Chaturvedi

arXiv Preprint 2202.00035 [[pdf](#)]

Conference papers:

- [10] **Adversarial Scrubbing of Demographic Information for Text Classification**

S. Basu Roy Chowdhury, S. Ghosh, Y. Li, J. Oliva, S. Srivastava and S. Chaturvedi

Proceedings of EMNLP, 2021 (Long) [[pdf](#)]

- [9] **Is Everything in Order? A Simple Way to Order Sentences**

S. Basu Roy Chowdhury*, F. Brahman* and S. Chaturvedi

Proceedings of EMNLP, 2021 (Long) [[pdf](#)]

- [8] **Learning beyond datasets: Knowledge Graph Augmented neural networks for NLP**

K.M. Annervaz*, S. Basu Roy Chowdhury* and A. Dukkipati.

Proceedings of NAACL-HLT, 2018. (Long, Oral) [[pdf](#)]

Other refereed publications:

- [7] **Does Commonsense help in detecting Sarcasm?**
S. Basu Roy Chowdhury and S. Chaturvedi
Proceedings of Insights from Negative Results in NLP workshop, EMNLP, 2021 [\[pdf\]](#)
 - [6] **Towards efficient data normalization using grammar-based parsing**
S. Basu Roy Chowdhury, A. Mishra and A. Banerjee
Proceedings of Microsoft Journal of Applied Research (MSJAR), 2020 [\[pdf\]](#)
 - [5] **Instance-based Inductive Deep Transfer Learning by Cross-Dataset Querying with LSH**
S. Basu Roy Chowdhury, K.M. Annervaz and A. Dukkipati.
Proceedings of DeepLo Workshop, EMNLP, 2019. [\[pdf\]](#)
 - [4] **AdGAP: Advanced Global Average Pooling**
A. Ghosh, B. Bhattacharya* and S. Basu Roy Chowdhury*
Proceedings of AAAI, Student Abstract and Poster Program, 2018. [\[pdf\]](#)
 - [3] **Training Autoencoders in Sparse Domain**
B. Bhattacharya, A. Ghosh* and S. Basu Roy Chowdhury*
Proceedings of AAAI, Student Abstract and Poster Program, 2018. [\[pdf\]](#)
 - [2] **Handwriting Profiling using Generative Adversarial Networks**
A. Ghosh*, B. Bhattacharya* and S. Basu Roy Chowdhury*
Proceedings of AAAI, Student Abstract and Poster Program, 2017. [\[pdf\]](#)
 - [1] **SAD-GAN: Synthetic Autonomous Driving using Generative Adversarial Networks**
A. Ghosh*, B. Bhattacharya* and S. Basu Roy Chowdhury*
Proceedings of DLAI Workshop, NeurIPS, 2016. [\[pdf\]](#)
- (* = equal contribution)

Theses:

- [1] **Lung Cancer segmentation in 3D CBCT Images**
Advisor: Prof. [Jayanta Mukhopadhyay](#)
M.Tech. Thesis, IIT Kharagpur [\[pdf\]](#)

Research Experience

UNC Chapel Hill , Computer Science Dept. Graduate Research Assistant, UNC-NLP Advisor: Prof. Snigdha Chaturvedi	(Jan 2021 - present)
Accenture Technologies Lab (ATL) Research Intern, Topic: Knowledge graph enhanced NLP Advisor: K. M. Annervaz (ATL), Prof. Ambedkar Dukkipati , (IISc)	(May 2017 - Jul 2017)
Statistics and Machine Learning Group , IISc Research Intern, Topic: Low Resource NLP Advisor: Prof. Ambedkar Dukkipati	(May 2017 - Apr 2018)
Visual Information Processing Lab - IIT Kharagpur Undergraduate Researcher, Topic: Lung Cancer Segmentation in 3D CBCT Advisor: Prof. Jayanta Mukhopadhyay	(Jul 2016 - May 2018)
National Brain Research Centre - Gurgaon, India IAS Summer Fellow, Topic: Image Processing in MRI scans Advisor: Prof. Pravat Mandal	(May 2015 - Jul 2015)

Professional Service/ Teaching

- **Program Committee Member/ Reviewer**

ACL Rolling Review	2022, 2021
4 th workshop on Narrative Understanding Workshop , NAACL	2022
2 nd workshop on Insights from Negative Results in NLP , EMNLP	2021
3 rd workshop on Narrative Understanding Workshop , NAACL	2021

- *Teaching Assistant*

(EE21101) Signals and Networks Lab, IIT Kharagpur	2018
(EE19001) Electrical Technology Lab, IIT Kharagpur	2017

Talks

‘Probabilistically grounded word embeddings’, Bing paper reading forum, <i>Microsoft</i>	(Nov 2019)
‘Secure Machine Learning’, <i>Apple India Research Forum</i>	(April 2019)

Academic Achievements

• <i>Travel Award</i> from GPSG, UNC Chapel Hill for EMNLP 2021 (<i>declined</i>)	2021
• <i>All India Rank 7</i> (EECS) - Nationwide Education & Scholarship Test (NEST - II).	2017
• <i>ACM-ICPC Asia-Chennai Regionals</i> - Rank 33/1100	2015
• <i>IAS Summer Research Fellowship</i> - National Brain Research Center	2015
• <i>Department Change</i> , IIT Kharagpur - Rank 3/52 department students	2014
• <i>INSPIRE Scholarship</i> - Top 1 percentile in ISC (Grade 12).	2013
• <i>Top ranks</i> - JEE (Mains, Advanced): 99.9+ percentile, Top 1% in ISCE & ISC	2013

Miscellaneous Activities

• <i>Winner</i> of the WaterAid Marathon Hyderabad - 5km category	2019
• <i>Best Innovation Award</i> - Apple EMEA Hackathon	2018
• <i>Special Mention in Technology GC</i> - Graduating batch LBS Hall.	2018
• <i>Silver-medal</i> winning Data Analytics team - Inter-hostel GC	2017
• <i>Gold-medal</i> winning Hardware Modeling team- Inter-hostel GC	2015
• 5 th year distinction in <i>Fine Arts</i> and Painting - All India Art and Crafts Society	2010