

Koustuv Sinha

CONTACT INFORMATION

🏠 3421 Rue Durocher, Apt 403,
Montreal, Quebec H2X2C6, Canada

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RESEARCH INTERESTS

Systematicity in Natural Language Processing, Neural Reasoning on Language, Linguistics, Dialog Systems

EDUCATION

McGill University, Montreal, QC, Canada

PhD Student, School of Computer Science, September 2018 - present

- Advised by: Dr Joelle Pineau
- Collaborators: Dr Adina Williams, Dr William L. Hamilton, Dr Timothy J o'Donnell
- GPA : 4.0

MSc Thesis, School of Computer Science, September 2016 - August 2018

- Thesis: Hierarchical text classification of large-scale topics: a Neural approach
- Advised by: Dr Derek Ruths, Collaboration with : Dr Joelle Pineau
- GPA : 3.94/4

RESEARCH EXPERIENCE

Facebook AI Research (FAIR), Montreal, QC, Canada

PhD Research Intern

Jan 2019 - Present

- Collaborations from NLP group: Dr Adina Williams, Dr Douwe Kiela, Dr Dieuwke Hupkes, Dr Robin Jia
- Collaborations from Covid X-ray diagnosis group: Anuroop Sriram, Matthew Muckley
- Collaborations from Core ML group: Shagun Sodhani

Samsung Advanced Institute of Technology, Montreal, QC, Canada

Research Intern

Summer 2018

- Collaborations from Language Technology group: Sanghyun Yoo

McGill University, Montreal, QC, Canada

Research Associate, Dialog Group - *RL Lab* / Mila

June 2017 - present

Supervised by Dr. Joelle Pineau

Research Associate, *Network Dynamics Lab*

September 2016 - August 2018

Supervised by Dr. Derek Ruths and collaboration with David Jurgens

Research Associate, *txtLab - NovelTM Project*

September 2016 - August 2017

Supervised by Dr. Andrew Piper

Indian Institute of Technology, Kanpur, India

Senior Project Associate

September 2015 - March 2016

Department of Computer Science & Engineering

Supervised by Dr. Arnab Bhattacharya & Dr. Koumudi Patil

TEACHING EXPERIENCE

McGill University, Montreal, QC, Canada

Teaching Assistant, COMP 652 Machine Learning **Fall 2018**
Riashat Islam, Dr Audrey Durand

Teaching Assistant, COMP 551 Applied Machine Learning **Fall 2017**,
Prof. Dr. Joelle Pineau, Dr Herke Van Hoof, Sarath Chandar,
Ryan Lowe **Winter 2018**

Teaching Assistant, COMP 102B Computers & Computing **Winter 2017**
Prof. Dr. Derek Ruths

Teaching Assistant, COMP 189 Computers & Society **Fall 2016**
Prof. Dr. Derek Ruths

PUBLICATIONS

- [Koustuv Sinha](#), Robin Jia, Dieuwke Hupkes, Joelle Pineau, Adina Williams, Douwe Kiela; *Masked Language Modeling and the Distributional Hypothesis: Order Word Matters Pre-training for Little*, Empirical Methods of Natural Language Processing (EMNLP), 2021
- Prasanna Parthasarathi, [Koustuv Sinha](#), Joelle Pineau, Adina Williams; *Sometimes we want Translationese*, Empirical Methods of Natural Language Processing (EMNLP) Findings 2021
- [Koustuv Sinha](#), Prasanna Parthasarathi, Joelle Pineau, Adina Williams; *UnNatural Language Inference*, Association of Computational Linguistics (ACL), 2021, **Oral, Outstanding Paper Award**
- Joelle Pineau, Philippe Vincent-Lamarre, [Koustuv Sinha](#), Vincent Larivière, Alina Beygelzimer, Florence d'Alché-Buc, Emily Fox, Hugo Larochelle; *Improving Reproducibility in Machine Learning Research (A Report from the NeurIPS 2019 Reproducibility Program)*, Journal of Machine Learning Research (JMLR), 2020
- Nicolas Gontier, [Koustuv Sinha](#), Siva Reddy, Christopher Pal; *Measuring Systematic Generalization in Neural Proof Generation with Transformers*, Neural Information Processing Systems (NeurIPS), 2020
- [Koustuv Sinha](#), Joelle Pineau, Jessica Forde, Rosemary Nan Ke, Hugo Larochelle; *NeurIPS 2019 Reproducibility Challenge*, ReScience-C Journal, Volume 6, Issue 2, 2020
- [Koustuv Sinha](#), Prasanna Parthasarathi, Jasmine Wang, Ryan Lowe, William L. Hamilton, Joelle Pineau; *Learning an Unreferenced Metric for Online Dialog Evaluation*, Association of Computational Linguistics (ACL), 2020
- Emily Goodwin, [Koustuv Sinha](#), Timothy J O'Donnell; *Probing Linguistic Systematicity*, Association of Computational Linguistics (ACL), 2020
- [Koustuv Sinha](#), Shagun Sodhani, Jin Dong, Joelle Pineau and Will Hamilton; *CLUTRR: A Diagnostic Benchmark for Inductive Reasoning in Text*, Empirical Methods of Natural language Processing (EMNLP), 2019, **Oral**
- Joelle Pineau, [Koustuv Sinha](#), Genevieve Fried, Rosemary Nan Ke, and Hugo Larochelle; *ICLR Reproducibility Challenge, 2019*, ReScience-C Journal, Volume 5, Issue 2, 2019
- [Koustuv Sinha](#), Yue Dong, Jackie Chi-kit Cheung and Derek Ruths; *A Hierarchical Neural Attention-based Text Classifier*, Empirical Methods of Natural language Processing (EMNLP), 2018
- Peter Henderson, [Koustuv Sinha](#), Nicolas Angelard-Gontier, Nan Rosemary Ke, Genevieve Fried, Ryan Lowe, Joelle Pineau; *Ethical Challenges in Data-Driven Dialogue Systems*, AAAI/ACM conference on Ethics and Safety, 2017

PREPRINTS

- Anuroop Sriram, Matthew Muckley, [Koustuv Sinha](#), Farah Shamout, Joelle Pineau, Krzysztof J. Geras, Lea Azour, Yindalon Aphinyanaphongs, Nafissa Yakubova, William

	<p>Moore; <i>COVID-19 Deterioration Prediction via Self-Supervised Representation Learning and Multi-Image Prediction</i>, January 2021</p> <ul style="list-style-type: none"> • Koustuv Sinha, Shagun Sodhani, Joelle Pineau, William L. Hamilton; <i>Evaluating Logical Generalization in Graph Neural Networks</i>, March 2020 • Nicolas Gontier, Koustuv Sinha, Peter Henderson, Iulian Serban, Michael Noseworthy, Prasanna Parthasarathi, Joelle Pineau; <i>The RLLChatbot: a solution to the ConvAI Challenge</i>, November 2018 • Peter Henderson, Koustuv Sinha, Rosemary Nan Ke, Joelle Pineau; <i>Adversarial Gain</i>, November 2018
INVITED TALKS	<ul style="list-style-type: none"> • <i>ML Reproducibility - From Theory to Practice</i>, MICCAI Hackathon, Peru, October 2020 (held online) • <i>ML Reproducibility - From Theory to Practice</i>, DL4Science Seminar, Lawrence Berkeley National Laboratory, Berkeley, August 2020 (held online) • <i>Evaluating Logical Generalization with Graph Neural Networks</i>, Weights and Biases Salon, May 2020 (held online) • <i>Best practices for ensuring Reproducibility in CS Research</i>, 1st Annual CS-Can Student Symposium, Montreal, 2019 • <i>On the unreasonable complexity of detecting social interactions in literature</i>, Digital Humanities (DH) 2017, July'17, McGill University, Montreal
ACTIVITIES	<ul style="list-style-type: none"> • Co-organizer, Machine Learning Reproducibility Challenge (2021*, 2020*, 2019 NeurIPS, 2019 ICLR, 2018 ICLR) * <i>From 2020 onwards, the Machine Learning Reproducibility Challenge incorporated papers from 7 top conferences: NeurIPS, ICML, ICLR, ACL, EMNLP, CVPR, ECCV</i> • Reproducibility Co-Chair, Neural Information Processing Systems (NeurIPS), 2019, 2020 • Associate Editor, ReScience (2019-Present) • Student Volunteer, Neural Information Processing Systems (NeurIPS), Montreal, December 2018 • Student Volunteer, Montreal AI Symposium (MAIS), August 2018 • Student Volunteer, 11th International Conference on Web and Social Media (ICWSM), May 2017, Montreal • President, Computer Science Graduate Society (CSGS), McGill University, 2018-19; VP Social and Finance, 2017-18 • Host, Nodeschool Kolkata Chapter, Institute of Engineering & Management, Kolkata, May 2016.
AWARDS & ACHIEVEMENTS	<ul style="list-style-type: none"> • Outstanding Paper Award at Association for Computational Linguistics (ACL) 2021 for the paper “UnNatural Language Inference” • Fonds Nature et Technologies Quebec (FRQNT) scholarship for Master level study in Computer Science, 2018 • Facebook ParlAI Grant for project proposal <i>Multi-model dialog generation with Off-Policy Q Learning</i>, Fall 2017 • Pierre Arbour Foundation Scholarship for Master level study in Computer Science & Engineering, 2017-18 • Sridharacharya Prize for Computer Excellency awarded due to consistent Highest Marks in Computer Science at Ramakrishna Mission Vidyalaya, Narendrapur, 2007
REFERENCES	Available on request.

MORE
INFORMATION

Google Scholar Profile

<https://scholar.google.ca/citations?user=9P9QcckAAAAJ&hl=en>

LinkedIn Profile

<https://in.linkedin.com/in/koustuvsinha>.

Github Profile

<https://github.com/koustuvsinha>.