SOPAN KHOSLA

(412)-370-3255 ⋄ sopank@andrew.cmu.edu ⋄ Website ⋄ Github ⋄ LinkedIn
Carnegie Mellon University, Pittsburgh, PA, 15213

EDUCATION

Carnegie Mellon University - School of Computer Science — **Pittsburgh, PA**
Masters in Language Technologies, Language Technologies Institute | **GPA:** 4.04/4.33 — August 2021

- **Courses:** Machine Learning, RL, Algo for NLP, Question Answering, Neural Networks for NLP, Causal Learning

Indian Institute of Technology — **Roorkee, India**
B.Tech, Computer Science and Engineering | **GPA:** 9.43/10, Department Rank 3 — June 2017

- **Courses:** Data Structures and Algorithms, Artificial Intelligence, Advanced Graphical Networks, Data Mining
- **Honors:** Director's Gold Medal for Outstanding All-round Achievement

EXPERIENCE

Carnegie Mellon University — **Pittsburgh, PA**
Research Assistant (Under the guidance of Prof. Carolyn Rose) — August 2019 - Present

- Created a deep-learning system which uses speaker-aware dialogue-modeling and medical concept grounding using UMLS to extract medically relevant information from doctor-patient conversations (First author paper at EMNLP 2020)
- Designed a machine-learning architecture which leverages semantic-type information to improve entity coreference resolution on state-of-the-art academic datasets (First author paper at NAACL 2021 and CODI@EMNLP 2020)
- Spearheading the planning of CODI 2021 shared-task on anaphora and coreference resolution in dialog (a collaboration with Prof. Massimo Poesio, Prof. Michael Strube, Prof. Carolyn Rose, and Prof. Vincent Ng)

Adobe Research India — **Bangalore, India**
Research Engineer — July 2017 - July 2019

- Developed machine-learning models to perform affect analysis on user-generated content (4 papers, 5 patents filed)
- Developed a technique to quantify latent customer experience from analytics clickstream data (2 papers, 2 patents filed)
- Mentored 18 students over their summer internships at Adobe Research

Adobe Research India — **Bangalore, India**
Research Intern — May 2016 - August 2016

- Designed a method to characterize and score users on a website based on their ad-blocking tendency
- Designed a model to calculate effectiveness of different anti ad-blocking strategies on websites (1 paper, 1 patent filed)

SELECTED PUBLICATIONS (Google Scholar)

- **Sopan Khosla**, James Fiacco, and Carolyn Rose. *Evaluating the Impact of a Hierarchical Discourse Representation on Entity Coreference Resolution Performance.* NAACL-HLT 2021 (To Appear).
- Kundan Krishna, **Sopan Khosla**, Jeffrey P Bigham, Zachary C Lipton. *Generating SOAP Notes from Doctor-Patient Conversations.* ACL 2021 (To Appear).
- Sharmila Reddy Nangi, Niyati Chhaya, **Sopan Khosla**, Nikhil Kaushik and Harshit Nyati. *Counterfactuals to Control Latent Disentangled Text Representations for Style Transfer.* ACL 2021 (To Appear).
- **Sopan Khosla**, Shikhar Vashishth, Jill Fain Lehman, and Carolyn Rose. *Improving Detection and Categorization of Task-relevant Utterances through Integration of Discourse Structure and Ontological Knowledge.* EMNLP 2020.
- **Sopan Khosla**, and Carolyn Rose. *Using Type Information to Improve Entity Coreference Resolution.* CODI @ EMNLP 2020.
- **Sopan Khosla***, Rishabh Joshi*, Ritam Dutt*, Alan Black, and Yulia Tsvetkov. *LTIatCMU at SemEval-2020 Task 11: Incorporating multi-level features for multi-granular propaganda span identification.* SemEval @ COLING 2020 (**4**th **rank**).
- **Sopan Khosla***, Kushal Chawla*, and Niyati Chhaya. *Gated Convolutional Encoder-Decoder for Semi-supervised Affect Prediction.* In Pacific-Asia Conference on Knowledge Discovery and Data Mining, PAKDD 2019. (* Joint First Authors)
- Atanu R. Sinha, Deepali Jain, Nikhil Sheoran, **Sopan Khosla**, and Reshmi Sasidharan. *Surveys without Questions: A Reinforcement Learning Approach.* AAAI 2019.
- **Sopan Khosla**, Niyati Chhaya, and Kushal Chawla. *Aff2Vec: Affect–Enriched Distributional Word Representations.* In Proceedings of the 27th International Conference on Computational Linguistics, COLING 2018.
- **Sopan Khosla**. *EmotionX-AR: CNN-DCNN autoencoder based emotion classifier.* In Proceedings of the Sixth International Workshop on Natural Language Processing for Social Media, ACL 2018 (**Shared-Task Winner System**).

SKILLS

- **Languages:** Python (including pandas, numpy, Django), C++, Java, PHP, Javascript, CSS, HTML, SQL
- **ML Frameworks and Packages:** Pytorch, Tensorflow, Keras, Scikit-Learn, NLTK, HuggingFace, SpaCy, Matplotlib
- **Others:** NLP, Machine Learning, Data-Mining, Full-stack Development, Linux, Git, RDBMS, MongoDB, AWS