

KUSHAL CHAWLA

University of Southern California
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EDUCATION

University of Southern California

2019 – *Present*

PhD in Computer Science

- *Thesis*: Computational Foundations for Mixed-Motive Human-Machine Dialogue
- *Advisors*: Gale Lucas, Jonathan Gratch
- *Other Committee Members*: Jonathan May, Peter Kim, Maja Mataric
- *Expected Graduation*: April 2024
- *GPA*: 4.0/4.0

Indian Institute of Technology Guwahati

2013 – 2017

Undergraduate in Computer Science & Engineering

- *GPA*: 9.76/10 (Institute Rank 2 in ~ 650)

EXPERIENCE

Research Intern, Google Research

Summer 2022

Dr. Hannah Rashkin

- Investigations for addressing trade-offs in designing practical knowledge-grounded dialogue.

Research Intern, Amazon Alexa

Summer 2021

Dr. Nikolaos Malandrakis

- Explored turn-taking in multi-party dialogues to enable more natural conversations with Alexa.

Predoctoral Researcher, Big Data Experience Lab, Adobe Research

2017 – 2019

- Contributed to the research in affect recognition from text and conditional text generation tuned towards topical and affective preferences of the user. Publications and patents below.

Research Intern, Big Data Experience Labs, Adobe Research

Summer 2016

Dr. Ritwik Sinha

- Applied Frequent Itemset Mining and Time Series Analysis in a team of two, estimating the size of target audience in terms of bid requests received by Adobe Media Optimizer (AMO).
- Filed a patent and published the work at AdKDD workshop in KDD 2018.

Research Intern, Center for Quantum Technologies, National University of Singapore

Summer 2015

Prof. Rahul Jain

- Enabled the communication of quantum information through a noisy quantum channel via near optimality of Petz Recovery Map.

SELECTED PUBLICATIONS

- **K Chawla**, I Wu, Y Rong, G Lucas, J Gratch, *Be Selfish, But Wisely: Investigating the Impact of Agent Personality in Mixed-Motive Human-Agent Interactions*, EMNLP 2023.
- **K Chawla**, W Shi, J Zhang, G Lucas, Z Yu, J Gratch, *Social Influence Dialogue Systems: A Survey of Datasets and Models For Social Influence Tasks*, EACL 2023.
- **K Chawla**, R Clever, J Ramirez, G Lucas, J Gratch, *Towards Emotion-Aware Agents for Improved User Satisfaction and Partner Perception in Negotiation Dialogues*, IEEE Transactions on Affective Computing 2023.
- **K Chawla**, G Lucas, J May, J Gratch, *Opponent Modeling in Negotiation Dialogues by Related Data Adaptation*, Findings of NAACL 2022.
- **K Chawla**, R Clever, J Ramirez, G Lucas, J Gratch, *Towards Emotion-Aware Agents For Negotiation Dialogues*, AACL 2021.
- **K Chawla**, J Ramirez, R Clever, G Lucas, J May, J Gratch, *CaSiNo: A Corpus of Campsite Negotiation Dialogues for Automatic Negotiation Systems*, NAACL 2021.
- A Sancheti, **K Chawla**, G Verma, *LynyrdSkynyrd at WNUT-2020 task 2: semi-supervised learning for identification of informative COVID-19 english tweets*, WNUT, EMNLP 2020.
- **K Chawla**, N Chhaya, *Session-Based Path Prediction by Combining Local and Global Content Preferences*, ECIR 2020.
- **K Chawla**, N Chhaya, B Srinivasan, *Generating Formality-tuned Summaries Using Input-dependent Rewards*, CoNLL 2019.
- **K Chawla**, S Khosla, N Chhaya, *Gated Convolutional Encoder-Decoder for Semi-Supervised Affect Prediction*, PAKDD 2019.
- S Khosla, N Chhaya, **K Chawla**, *Aff2Vec: Affect-Enriched Distributional Word Representations*, COLING 2018.
- N Chhaya, **K Chawla**, T Goyal, P Chanda, J Singh, *Frustrated, Polite, or Formal: Quantifying Feelings and Tone in Email*, PEOPLES, NAACL HLT 2018.
- **K Chawla**, SK Sahu, A Anand, *Investigating How Well Contextual Features are Captured by Bi-directional Recurrent Neural Network Models*, ICON 2017.

CO-AUTHORED PATENTS

- *Predicting joint intent-slot structure*; Publication No. US 2021/0264111 A1
- *Web Experience Augmentation Based on Local and Global Content Preferences*; Publication No. US 2021/0081467 A1
- *Affect-enriched Vector Representation of Words for use in Machine-Learning Models*; Patent No. US 11,023,685 B2
- *Machine Learning Techniques for Generating Document Summaries Targeted to Affective Tone*; Patent No. US 10,891,427 B2
- *Generating Summary Content Tuned To a Target Characteristic Using a Word Generation Model*; Patent No. US 11,062,087 B2
- *Detecting Affective Characteristics Of Text With Gated Convolutional Encoder-Decoder Framework*; Publication No. US 2020/0192927 A1
- *Content Optimization for Audiences*; Patent No. US 10,922,492 B2
- *Prediction of tone of interpersonal text communications*; Patent No. US 10,796,095 B2

- *Augmented reality predictions using machine learning*; Patent No. US 10,755,088 B2
- *Forecasting Potential Audience Size and Unduplicated Audience Size*; Patent No. US 11,080,745 B2

GRADUATE COURSEWORK

Advanced NLP, Advanced Topics in Deep Learning, Human-Robot Interaction
Advanced Analysis of Algorithms, Affective Computing, Crafting a Research Agenda

TECHNICAL STRENGTHS

Computer Languages	Python, C++, Bash
Libraries and Frameworks	PyTorch, Tensorflow, Scikit-Learn, ParlAI, Git, HuggingFace, React JS, IAGO Negotiation, LIONESS Dialogue Data Collection

ACHIEVEMENTS

- **Finalist** for the 2023 Meta Research PhD Fellowship.
- **Nomination for the Best Paper Award** at WeCNLP 2021.
- **First Prize** at the Human-Agent Negotiation League at ANAC, IJCAI 2020.
- Awarded the **Annenberg Fellowship** for 4 years of Ph.D. at USC.
- Recipient of the IIT Guwahati **Institute Merit Scholarship** (IMS) for the year 2014 – 15.
- First Year Undergraduate **Institute Topper** with GPA 10/10, earning a change of Major from Electrical Engineering to Computer Science.

SERVICE/OTHER INVOLVEMENTS

- **Workshop Organization:** General Chair for the *Workshop on Social Influence in Conversations* (First iteration at ACL 2023; Second iteration at EMNLP 2024).
- **Invited Talks:** AI Think Tank, Northwestern University (Oct 2023); Google NLP Group (July 2021); Adobe Research (November 2021)
- **Regular reviewer** for the past five years at top-tier AI and *ACL venues, including AAAI, IJCAI, ARR, ACL, EMNLP, EACL, and NAACL.
- **Mentored** nearly 15 Undergraduate and Master students at Adobe Research and USC.
- **Teaching Assistant** for Analysis of Algorithms, Applied NLP, Introduction to Computing