

# KUSHAL CHAWLA

University of Southern California  
[kchawla@usc.edu](mailto:kchawla@usc.edu)  $\diamond$  [kushalchawla.github.io](https://kushalchawla.github.io)

## EDUCATION

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### 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  $\sim$  650)

## EXPERIENCE

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### 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 the topic and affect preferences of users. Publications and patents are 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 the 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

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- **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

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- *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

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

## TECHNICAL STRENGTHS

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

## ACHIEVEMENTS

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- **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

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- **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 Applied NLP, Analysis of Algorithms, Introduction to Computing