KUSHAL CHAWLA

University of Southern California
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EDUCATION

University of Southern California 2019 – *Present*
Ph.D. in Computer Science

- *Advisors*: Gale Lucas, Jonathan Gratch
- *Research Interests*: Enabling Human Computer Interactions through Natural Language
- *Current 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

Applied Scientist Intern, Alexa AI, Amazon *Summer* 2021
Dr. Nikolaos Malandrakis

- Explored turn taking in multi-party dialogues for enabling more natural conversations with Alexa.

Researcher, Big Data Experience Labs, Adobe Research 2017 – 2019

- Primarily focused on understanding affect and semantic properties of textual content and generating text tuned towards it. Publications and patents below.

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.

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**, 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*, ACII 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.

OTHER PROJECTS

- Built Pilot: winner of the human-agent negotiation challenge at the International Joint Conference on Artificial Intelligence (IJCAI-PRICAI 2020). *Paper* *Media coverage* *Presentation* 2020
- Designed a novel task of predicting negotiation outcomes, well before it is complete, to assess the role of natural language in negotiations. *Paper* 2020

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

Crafting a Research Agenda	Spring 2021
Human Robot Interaction	Spring 2021
Advanced Topics in Deep Learning	Fall 2020
Affective Computing	Spring 2020
Advanced Natural Langauge Processing	Fall 2019

TECHNICAL STRENGTHS

Computer Languages	Python, C++
Libraries and Frameworks	PyTorch, Tensorflow, ParlAI, HuggingFace, React JS, IAGO Negotiation Framework

ACHIEVEMENTS

- 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 the University of Southern California.
- 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.
- All India Rank 62 in KVPY Government of India Fellowship 2012.

SERVICE/OTHER INVOLVEMENTS

- Invited Talks: Google NLP Group (July 2021), Adobe Research (November 2021)
- Reviewer: ARR 2021-2022, AAAI 2022, EMNLP 2021, ACL 2021, ICON 2020, WNUT@EMNLP 2020
- Sub-reviewer: EMNLP 2020, CoDS-COMAD 2019
- Co-mentored 12 undergraduate researchers during summers at Adobe and USC.
- Teaching Assistant for Applied Natural Language Processing (CSCI 544) at USC, and Introduction to Computing (CS 101) at IIT Guwahati.
- Volunteer English Teacher for rural students with *eVidyaloka* NGO in 2018-2019.
- Manager and Marketing Executive at the annual cultural festival of IIT Guwahati: Alcheringa 2015.