DON LEE

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Education

Carnegie Mellon University   **Pittsburgh, PA**
M.S. Machine Learning   Expected Grad: May, 2022

Carnegie Mellon University   **Pittsburgh, PA**
B.S. Statistics and Machine Learning   May, 2021

Publications

Published

- **D. Lee**, C. Ahuja, R. Ishii, and L. Morency, "Crossmodal clustered contrastive learning: Grounding of spoken language to gestures", ICMI GENEA Workshop, 2021
- C. Ahuja, **D. Lee**, Y. Nakano, and L. Morency, "Style Transfer for Co-Speech Gesture Animation: A Multi-Speaker Conditional-Mixture Approach", ECCV 2020
- C. Ahuja, **D. Lee**, R. Ishii, and L. Morency, "No Gestures Left Behind: Learning Relationships between Spoken Language and Freeform Gestures", Findings EMNLP 2020

In Submission / Preparation

- **D. Lee**, HW. Park, C. Breazeal, "Role-Aware Graphical Next Speaker Prediction in Multimodal Multiparty Interaction" (In Submission at ACM/IEEE HRI 2022)
- C. Ahuja, **D. Lee,** and L. Morency, "Low-Resource Adaptation of Spatio-Temporal Crossmodal Generative Models" (In Preparation for CVPR 2022)
- **D. Lee**, C. Ahuja, P. Liang**,** and L. Morency, "Localized Presentations Dataset: Exploring Multimodality in Educational Videos" (In Preparation for NAACL 2022)
- **D. Lee**, B. Eysenbach, C. Lynch, S. Levine, R. Salakhutinov, "Language-Conditioned Control via Recursive Classification of Natural Language" (In Preparation for ICML 2022)

Research

Language Technologies Institute, Carnegie Mellon University   **Pittsburgh, PA**
Generation of Human Poses Conditioned on Language (Prof. L.P Morency)   Jun. 2019 ~ Present

- Submitted a paper on generating human co-speech gestures which are well-timed and relevant to the speaker's spoken language, which outperformed previous state-of-the-art approaches in coverage metric (F1) by 5 percent
- Collected and released a large-scale human gestures dataset, PATS (Pose, Audio, Transcript, Style), which includes 25 speakers and 251 hours of data to study the relationship between co-speech gestures with audio and text signals

Lecture Video Captioning (Prof. L.P Morency)   Jan. 2021 ~ Present

- Collected a new large-scale dataset of educational videos with 197 hours of data, 336 videos, a total number of 22,000 slides to build a machine learning model can explain slides with natural language.

Personal Robots Group, Massachusetts Institute of Technology   **(Remote) Boston, MA**
Human-Robot Engagement Prediction (Dr. Hae Won Park, Prof. Cynthia Breazeal)   May 2021 ~ Present

- Submitted a paper on graphical representation of a conversational group in a human-robot interaction setting conditioned on each speaker's role to improve performance on next speaker prediction by 5 percent (F1 & Accuracy)

Machine Learning Department, Carnegie Mellon University   **Pittsburgh, PA**
Language Guided Goal Conditioned RL (Prof. Ruslan Salakhutinov)   Jan. 2021 ~ Present

- Implemented a novel reinforcement learning algorithm which takes in a desired natural language description of a future state to infer the necessary actions to reach the goal state via recursive classification

Experience

Machine Learning Department, Carnegie Mellon University   **Pittsburgh, PA**
Convex Optimization (Taught by Prof. Yuanzhi Li)   (1 Semester) Feb. 2021 ~ May 2021

- Served as a TA for over 150 students for a graduate level course as an undergraduate student
- Led weekly office hours to clarify advanced mathematical concepts and theory, graded proofs and code

Statistics and Data Science Department, Carnegie Mellon University   **Pittsburgh, PA**
Statistics & Data Science Methods (Taught by Prof. Gordon Weinberg)   (4 Semesters) Aug. 2019 ~ May 2021

- Taught 2 classes: Statistical Reasoning and Practice and Statistical Methods
- Led weekly R lab sessions where students practiced statistical methods, hosted weekly office hours to clarify concepts, graded exams and homework for over 200 students in each class

Special Operations Command, Republic of Korea Army   **Abu Dhabi, UAE**
Deployed Special Operations Unit Interpreter   Jun. 2017 ~ May. 2019

- Selected (2 out of 192 candidates) to serve as interpreter for AKH 14 Korean Special Operations Unit UAE
- Led and organized week-long combined mountain warfare training for UAE Special Operations soldiers

Professional Services & Awards

Workshop Chair: 1st Workshop on Crossmodal Social Animation (ICCV 2021)
Reviewer: EMNLP 2021, ICMI 2021
Awards: Undergraduate Research Grant (CMU, 2019), Certificate of Commendation, Excellence (ROK Spec. Ops)