Trenton Chang

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EDUCATION

University of Michigan–Ann Arbor — Ann Arbor, MI
PhD, Computer Science and Engineering — 2021–present
Advisor: Jenna Wiens

Stanford University — Stanford, CA
M.S. in Computer Science, GPA: 4.05 — 2020–2021
Track: Artificial Intelligence

Stanford University — Stanford, CA
B.A. in American Studies, *with distinction*, GPA: 3.9 — 2016–2020
Concentration: Asian American Representation in Popular Culture

RESEARCH EXPERIENCE

Chirpy Cardinal — Stanford, CA
Research Assistant, Stanford NLP Group — November 2020 –present

- Implemented response module for user negative personal disclosures, inspired by crisis-counseling and active listening skills
- Wrote evaluation pipeline for neural response re-ranking and qualitative analysis
- Created model distillation pipeline for fast auto-regressive text decoding

Stanford AI Lab — Stanford, CA
Graduate Student Researcher, HazyResearch — March 2020 –present

- Led robustness study on the effect of real-world video network/file corruptions on machine learning model robustness
- Quantified the effect of network variables and model architecture variations on video model performance in real-time streaming setting
- Evaluated adversarial training, data augmentation, and file integrity checks against networking-corrupted data

MIT Department of Mechanical Engineering — Cambridge, MA (remote)
Graduate Student Researcher, Traverso Lab — June 2020 –November 2020

- Designed KNN-based algorithm for single-channel EEG-based between-person drowsiness detection, with >80% accuracy
- Implemented EEG data collection pipeline with OpenBCI on the NVIDIA Jetson

PUBLICATIONS

[1] **Chang, Trenton**, D. Y. Fu, Y. Li, and C. Ré, "Beyond the Pixels: Exploring the Effect of Video File Corruptions on Model Performance", in *2020 European Conference in Computer Vision, Workshop on Adversarial Robustness in the Real World*, Aug. 2020.

TALKS

1. **Chang, Trenton*** and Ganelin, Daniela*. Machine Learning Bias in Criminal Justice, to appear in *Computer Science Teachers of America Conference*, July 2021

Teaching

- **ACM Stanford** January 2021 - March 2021
  Research Mentor
  - Mentored accepted Big-BENCH submission on contrastive sarcastic text classification.
- **Inspirit AI** May - August 2020
  Instructor, Advanced Cohort
  - Developed project for high school students in analyzing machine learning fairness. Work presented at CSTA 2021.

Skills

- Adversarial/robust machine learning
- Neural computer vision
- Neural text generation for open-domain conversation
- Convex optimization

Scholarships and Awards

- Phi Beta Kappa (2020)