Ketan **Agrawal**

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Summary

I'm a master's student in Computer Science at Stanford using artificial intelligence in human-centered applications, such as developmental psych, mental healthcare, and human-computer interaction. My outputs include published research, an impactful web application at Amazon, and a hackathon-winning smart glove. In my free time, I enjoy extending Emacs, experimenting in my digital laboratory, and playing with my cats.

Education

Stanford University — *Stanford, CA*

M.S. in Computer Science (AI) — *Jan. 2021 - Jun. 2022 (expected)*

- GPA: 3.89/4.00
- Planned Coursework: Reinforcement Learning, Deep Generative Models, Graph Machine Learning

Stanford University — *Stanford, CA*

B.S. in Symbolic Systems (AI) — *Sep. 2017 - Jun. 2021*

- GPA: 3.82/4.00
- Relevant Coursework: Computer Vision, Natural Language Processing, Probabilistic Programming

Research Experience

Partnership in AI-Assisted Care — *Stanford, CA*

Research Assistant — *Jan. 2020 - present*

- Design AI tools for automated mental health assessment under Prof. Fei-Fei Li and Dr. Nirav Shah.
- Developing models using speech, facial, and linguistic features to detect depression/anxiety from patient interviews.
- Using unsupervised / semi-supervised pretraining to increase performance on small medical datasets.

Language and Cognition Lab — *Stanford, CA*

Research Assistant — *Oct. 2018 - Jun. 2020*

- Analyzing first-person infant headcam videos using computer vision algorithms under Prof. Michael Frank.
- Used human face and pose estimation algorithms to examine longitudinal trends in infants' visual scenes.
- Work accepted as a talk, presented at Conference of the Cognitive Science Society 2020.

Work Experience

Amazon Fire TV — *Gahanna, OH (virtual)*

Software Development Intern — *Jun. 2020 - Sep. 2020*

- Developed a web portal using React/Node/Typescript that now serves as a hub for onboarding partners such as Hulu and Youtube TV.
- Worked closely with engineers and manager to design intuitive, user-friendly workflows for data entry and verification.

CS 198 Teaching Program — *Stanford, CA*

Section Leader — *Jan. 2019 - present*

- Taught weekly discussion section and office hours for 3+ quarters of CS 106B (programming abstractions.)
- Worked with sectionees to create elegant, efficient solutions to data structures and recursion problems.

Projects

Interactive Timbre Exploration — *link →*

Using variational autoencoders (VAEs) to interactively vary the musical timbre (tone) of an note. — *2021*

Smart Glove — *link →*

Raspberry Pi-powered smart glove to control IoT devices. Won award in Interhackt hackathon. — *2020*

Org-Twitter — *link →*

Emacs package to tweet snippets and threads directly from your org-mode notes. — *2020*

Skills

Proficient Python, PyTorch, TypeScript, React.js, Node.js, C/C++

Some experience Neo4j, WebPPL, Lisp, Bash, Swift, Java