Helen Yang

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Education

Massachusetts Institute of Technology Cambridge, MA

BS Candidate in Computer Science and Engineering, Cognitive Science - ***GPA: 5.0/5.0*** *Expected June 2024*

- **Relevant Coursework**: Elements of Software Construction (6.031)*, Advanced Natural Language Processing (6.806)*, Design and Analysis of Algorithms (6.046), Machine Learning (6.036), Intro to Algorithms (6.006), Web Development (6.148), Discrete Math (6.042), Fundamentals of Programming (6.009); * = Fall 2021
- **Teaching/Lab Assistant**: 6.036 (Machine Learning, Fall 2021)
- **Leadership/Extracurriculars:** TechX/HackMIT/xFair (Executive Board, xFair Co-director), Society of Women Engineers (Outreach Chair), Pi Beta Phi (Committee Member), MIT Chamber Music Society

Technical Skills

Python, Java, HTML/CSS, JavaScript (React, Node.js), Typescript, Machine Learning (PyTorch, keras, tensorflow, spacy, nltk, DeepSpeed), MongoDB, SQL, Matlab, Django, Docker, Flask, Kubernetes, GCP, Azure, Jupyter, Linux, Unix

Experience

Machine Learning Engineer Intern May 2021 – Present

Department of Defense *Wright-Patterson Air Force Base, OH*

- Developing software for Bayesian goal inference technology and coding NLP models to process and categorize voices to predict agent actions. Integrating object detection/video-feed analysis into voice models and evaluating different contextual-embedding models. Using Python, tensorflow, transformers, nltk, HPC, Colab, Docker.

Software Engineering Intern June 2021 – Present

Infosys InStep *Quincy, MA*

- Developing several transformer and recurrent neural network-based named entity recognition (NER) models for entity identification and extraction of important text from official documents. Using Python, tensorflow, keras, transformers, nltk, scikit, spaCy, DeepSpeed, Azure.

Software Engineering Intern Jan 2021 – May 2021

Colgate-Palmolive *Piscataway, NJ*

- Developed a full-stack web application interface for machine learning researchers to record, export, and analyze their runs. Created an API for machine learning models to be integrated into the predictive chemistry website.
- Used SDLC, Kubernetes, Docker, GCP, Python, JavaScript, React, PostgreSQL, Node.js, and Django

Machine Learning Research Intern Aug 2020 – May 2021

Massachusetts Institute of Technology *Cambridge, MA*

- Developed a highly-accurate deep learning model for processing images and returning predictions of individual neuron activity in the mammalian brain. Developed another deep neural network to generate synthetic images that maximally excite select neurons. Model achieved over 95-percent accuracy. Used Python, Matlab, Unix.

Projects

helen.me | https://hyang5916.github.io/helen.me

- Built a website to display projects using React, Node.js, HTML/CSS, jQuery, Javascript.

icecreme.brulee | https://icecreme-brulee.herokuapp.com/

- Coded a full-stack gaming website based on a popular party game in TypeScript, React, Node.js, MongoDB.

an ocean in crisis | https://anoceanincrisis.com/

- Won a National Ocean Awareness Contest award for creating a blog to raise awareness about the numerous ecological catastrophes facing the ocean.

Awards

MIT Emerson Scholar; USABO National Finalist (6th highest score out of 10,000 in the USA); Tests of Engineering Aptitude, Mathematics, and Science National Finals; AP Scholar with Distinction; Fencing National Championships; National Orchestra Director's Award; Scholastic Art and Writing Gold Key