Helen Yang

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Education

Massachusetts Institute of Technology Cambridge, MA

BS Candidate in Computer Science and Engineering - ***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, C++, HTML/CSS, JavaScript (React, Node.js), TypeScript, Machine Learning (PyTorch, Keras, Tensorflow, SpaCy, nltk, pandas), MongoDB, SQL, Matlab, Django, Docker, Flask, Kubernetes, GCP, AWS, Linux, Unix

Experience

D.E. Shaw Discovery Fellow August 2021

D.E. Shaw & Co. *New York City, NY*

- One of 20 students selected for academic talent and intellectual curiosity to participate in unique educational and training opportunities in software and finance.

Machine Learning Engineer Intern June 2021 – Present

Department of Defense *Wright-Patterson Air Force Base*

- Developing software for Bayesian goal inference technology and coding NLP models to categorize speech for predicting agent actions. Integrating computer vision and object detection/video-feed analysis into speech models.
- Achieved over 200% speed-up in model run time. Using Python, Docker, Tensorflow, Transformers, nltk, Colab.

Software Engineering Intern June 2021 – August 2021

Infosys InStep *Quincy, MA*

- Developed application for automated text extraction and summarization from documents using several transformer and recurrent neural network-based NLP models. Used Python, Tensorflow, Keras, Transformers, Azure. Global immersion experience meeting and collaborating with 100 students from 50 top universities around the world.

Software Engineering Intern Jan 2021 – June 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, Django, and REST API.

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.

Personal Projects

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

- View all projects here. Built 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.

Awards

MIT Emerson Scholar; USABO National Finalist (6th highest score out of 10,000 in the USA); Technology Student Association State Winner & Nationals; Science Olympiad California State Gold Medals, AP Scholar with Distinction; Fencing National Championships; National Orchestra Director's Award; Scholastic Art and Writing Gold Key