David He

david-he.me US Citizen

EDUCATION

Georgia Institute of Technology

Atlanta, GA

B.S. in Computer Science, GPA: 4.0

Expected May 2025

- Concentrations: Computer Architecture & Modeling/Simulation
- Selected Coursework: Data Structures & Algorithms, Computer Systems & Networking, Computer Organization, Object-Oriented Programming, Linear Algebra, Multivariable Calculus

WORK EXPERIENCE

KidsTeachKids+ Chicago, IL

Founder, Software Engineer

Mar 2020 - Aug 2022

- Launched not-for-profit peer tutoring platform that has provided 100+ hours of free tutoring to local students.
- Developed a program automatically manage inventory of 100+ tutoring records using pygsheets.
- Automatically ported data from Google Sheets to generate PDFs of official volunteer hours using Python.
- Built responsive web app as proof-of-concept for complete system automation using React, Node.js, & Express.

LittleChineseChannel Chicago, IL

Software Engineering Intern

Jun 2020 - Sep 2020

- Planned and developed database-driven mobile-friendly website supporting 300+ active users using PHP & MySQL.
- o Designed mobile-friendly user-interface for students to learn and practice Chinese using Bootstrap, JS, & JQuery.
- Designed relational database schema to model students, teachers, classrooms, transactions, etc. using MySQL.
- Implemented user authentication and session management in PHP & MySQL.
- Created a program to automatically label 10,000+ images with UUIDs using Java.

Academia

Georgia Institute of Technology

Atlanta, GA

Undergraduate Researcher - Machine Reading Lab

Dec 2022 - Present

- Researched in-context learning for question answering, coreference resolution, and other downstream tasks.
- Investigated effects of demonstration-to-input similarity on performance of large language models.

Georgia Institute of Technology

Atlanta, GA

Team Member - Robot Collective

Aug 2022 - Dec 2022

- o Ported Docker image to a new Linux environment and troubleshooted deprecated dependencies.
- Configured network and MQTT broker for robot-server communication via pub/sub service.

Projects

Support Vector Machine | Python, Numpy, Pandas, Scikit-learn

- o Implemented soft-margin SVM and mini-batch stochastic gradient descent in vanilla Python.
- o Achieved 99% accuracy, 95% recall, and 95% precision in identifying breast cancer from diagnostic data.

Web Scraper | Python, Scrapy

• Built a web scraper to extract financial data from Yahoo Finance for 500+ stocks into spreadsheet for Wharton Global High School Investment Competition.

Monte Carlo Simulation | Python, Matplotlib

- Simulated Monte Carlo experiment to model and estimate internet bandwidth needs of the average American household for Mathworks M3 Challenge.
- Displayed results of simulation in histograms for presentation in research report using Matplotlib.

SKILLS

Languages: Java, Python, C, C++, Javascript, MySQL, PHP, HTML, CSS

Technologies: OOP, REST, AJAX, React, Node.js, Express, PyTorch, Docker, Bootstrap, JQuery, Git