David He

https://david-he.me US Citizen

EDUCATION

Georgia Institute of Technology

Atlanta, GA

B.S. in Computer Science Expected May 2025

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

WORK EXPERIENCE

KidsTeachKids+ Naperville, 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
- o Built responsive web app as proof-of-concept for complete system automation using React and Express

LittleChineseChannel Naperville, 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
- o Designed relational database schema to model students, teachers, classrooms, transactions, etc. using MySQL
- o Implemented user authentication and session management in PHP & MySQL
- Created a program to automatically label 10,000+ images with UUIDs using Java

Projects

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

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

Web Scraper | Python, Scrapy

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

Image to Text-code Converter | Python, Numpy

• Created a script in Python to resize and transform jpeg images into pasteable text-code for display in Mathematica

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
- $\circ~$ Displayed results of simulation in histograms for presentation in research report using Matplotlib

Honors & Awards

- National Merit Scholar Finalist
- AP Scholar with Distinction
- Illinois State Scholar
- Chicago Youth Symphony Orchestras Co-concertmaster

SKILLS

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

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

Development Topics: Machine Learning, Full-Stack Web Development, Relational Databases

Hobbies: Guitar, Violin, Cooking, Running, Reading, Poker