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David He

US Citizen

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EDUCATION

Georgia Institute of Technology — Atlanta, GA

B.S. in Computer Science — *Expected May 2025*

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

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
- Built responsive web app as proof-of-concept for complete system automation using React and Express

LittleChineseChannel — Naperville, IL

Software Engineer — *Jun 2020 – Sep 2020*

- Planned and developed database-driven mobile-friendly website supporting 300+ active users using PHP & MySQL
- 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

PROJECTS

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

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

Georgia Tech Vertically Integrated Project | Python, ROS

- Designing planning algorithms for multi-agent networks of autonomous robots

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
- Displayed results of simulation in histograms for presentation in research report using Matplotlib

SKILLS

Languages: Java, Python, Javascript, PHP, HTML, CSS

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

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

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