

Zhili Hu

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EDUCATION

University of Southern California

Los Angeles, CA

Master of Science in Computer Science | GPA: 3.34 / 4.0

Aug. 2024 - May. 2026

Pennsylvania State University

State College, PA

Bachelor of Science in Computer Science, (Minor) Mathematics | GPA: 3.51 / 4.0

Aug. 2020 - May. 2024

- **Relevant Coursework:** Data Structure and Algorithm, Artificial Intelligence, Deep Learning for Computer Vision, Operating system, Programming Language, Database Management System, Discrete Math, Statistics, Linear Programming

SKILLS

Programming Languages: Python, C, Java Script, CSS, SQL, HTML, R, Verilog

Development Tools: Visual Studio, GCP, Tableau, IntelliJ IDEA, pgAdmin, Spyder, Tensorflow, Colab, MATLAB

PROFESSIONAL EXPERIENCE

Helping Hands Corporation

Arizona, Gilbert (remote)

Software Development Engineer Internship

Apr. 2025 - Present

- Built a **React.js** SPA with React Router and Bootstrap, integrating Firebase Authentication and JWT-secured **REST APIs**.
- Designed and implemented research project management modules including CRUD, publishing, collaboration, memos, and tasks with Axios and role-based access control.
- Developed backend services with **Node.js**, **Express**, **MongoDB** and **Mongoose**, and integrated Nodemailer with Gmail OAuth2 for email notifications.
- Enhanced usability with react-hook-form validation, framer-motion animations, react-toastify alerts, and responsive UI design.

Malik Yusef Jones Inc.

Chicago, Illinois (remote)

Software Development Engineer Internship

Sep. 2024 - Dec. 2024

- Developed user-facing and admin-facing web pages using **HTML**, **Vue.js**, and **JavaScript** to support file upload and management functionalities.
- Designed and contributed to the implementation of a **MySQL**-based relational database for structured data storage and retrieval.
- Integrated interactive UI features using **JavaScript** to enhance responsiveness and user engagement.
- Optimized the login interface design for improved clarity and efficiency, enhancing overall user experience.

RESEARCH EXPERIENCE

Pennsylvania State University

Research Assistant

May. 2023 - Aug. 2023

Research Topic: **Physics-Informed Data-driven Modeling of Dynamical Systems on Graphs**

- Developed model and control of dynamical systems on graphs by **PyTorch**, based on **graph neural networks (GNN)** in **deep learning**.
- Built a new class to encapsulate the loss functions, training function, testing function etc, and encapsulated main part into other files to improve code security and readability.

PROJECT EXPERIENCE

Full-Stack User Information Management System (<https://github.com/Huzzzl/Zhili-s-Management-System/tree/main>)

- Developed a comprehensive information management system utilizing **Vue.js** and **ElementUI** for the frontend, delivering a responsive and user-friendly interface.
- Engineered backend services with **Spring Boot**, implementing **RESTful APIs** to facilitate seamless communication between the client and server.
- Integrated **Redis** as a non-relational database to enhance data retrieval speeds and optimize system performance.
- Implemented core functionalities including user authentication, CRUD operations for user information, and dynamic data display adjustments, ensuring efficient information management.

Full-stack Artsy Information Search Platform (<https://hw3frontend-456204.wl.r.appspot.com/>)

- Deployed and hosted the application on Google Cloud Platform (GCP), ensure smooth, low-latency user interaction across sessions, demonstrating **cloud deployment** proficiency and **CI/CD** awareness.
- Developed a responsive web application using **Angular** and **Bootstrap** to enable interactive artist searches via the **Artsy API**.
- Realized independent deployment of the frontend and backend of the cloud platform. The backend used the **Node.js** framework, linked to **MongoDB** database and API, realized independent information management.