Francine Wei

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EDUCATION

University of North Carolina at Chapel Hill **Expected May 2026**
Bachelor's Degree in Computer Science and Information Science, Minor in Neuroscience *GPA: 3.82/4.00*

Coursework: Data Structures and Analysis, Computer Organization, Systems Fundamental, Discrete Math, Foundations of SWE, Files and Databases, Modern Web Programming, Information Retrieval, Interactive Computer Graphics, Computer Security Concepts

Additional Activities: The Helping Hand Project UNC (Aug. 2022 – May 2023); Chapel Thrill Escapes (Aug. 2022 – May 2024); Kappa Phi Lambda (Jan. 2023 – Present); WinSPIRE (Aug. 2024 – Dec. 2024);

SKILLS

Programming Languages: TypeScript, JavaScript, Python, Java, SQL
Technical Skills: Git, Agile Methodologies, Angular, HTML, CSS, TailwindCSS, React.js, Node.js, FastAPI, SQLAlchemy, Vercel, WebGL, Docker, OpenShift, Cloudflare, MATLAB, Fusion360, OnShape

EXPERIENCES

Siemens (SaaS and Intelligent Systems Research Group) **Princeton, NJ**
User Interface Intern May 2025 – Sept. 2025

- Supported a government-funded AI safety initiative for the Federal Railroad Administration by creating workflow diagrams and use case documentation for an explainable AI–based railway obstruction detection system.
- Built a JSON-based Operational Design Domain (ODD) taxonomy through literature review and tool evaluation; collaborated with researchers to refine system models and strengthen stakeholder-facing documentation.
- Developed and deployed a Streamlit/Python front-end for an AI-assisted building management system, improving real-time dashboards and usability for facility managers.
- Led full-stack development of a React/TypeScript application for Neo4j knowledge graph validation (20,000+ nodes), implementing Supabase authentication and building dual dashboards for admin and tester users.

China-US Culture Exchange Program **Langfang City, Hebei Province, China**
Program Coordinator Aug. 2024 – Present

- Manage program logistics and operations and developed centralized web platform to streamline applicant experience

The Helping Hand Project UNC **Chapel Hill, NC**
Frontend Developer Aug. 2022 – May 2023

- Developed and maintained a website showcasing nonprofit prosthetic projects using HTML, Bulma CSS, and JavaScript, leveraging interactive 3D elements and outreach forms to enhance community engagement, drive user participation, and raise awareness.

Google **Remote**
CSSI Scholar June 2022 – Aug. 2022

- Built a full-stack route planner with Google Maps API to optimize campus travel during a 4-week Google-engineer-led mentorship, while completing 14 JavaScript projects to master core programming concepts.

PROJECTS

Get It Done Jan. 2025 – May 2025

- Designed and developed a full-stack task tracking web application using Supabase, TypeScript, ShadCn UI, and React.js
- Built dynamic task management features including prioritization, filtering by type, and deadline-based sorting,
- Enabled collaborative productivity by supporting shared task lists and real-time updates across users

ShapeShift Prosthetics Nov. 2024

- Created and launched a platform in 24 hours using NiceGUI and Python to improve prosthetic accessibility, enabling users to generate 3D-printable, customized transradial prosthetics through an intuitive frontend and dynamic backend modeling.

CSXL Lab Open Hours Editor Aug. 2024 – Dec. 2024

- Designed and developed a full-stack, calendar-based open hours editor using Angular, TypeScript, CSS grids, FastAPI, and SQLAlchemy, integrating authentication, recurring schedule support, and new API endpoints into an existing production system to enhance admin functionality for UNC's Computer Science Experience Lab.