Francine Wei

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EDUCATION

University of North Carolina, Chapel Hill | Chapel Hill, NC　　　　Expected Graduation May 2026
B.A. in Computer Science　　　　　　　　　　　　　　　　　　　　　　Cumulative GPA: 3.79/4.0
B.S. in Information Science
Minor in Neuroscience

PROJECTS

GOOGLE
CSSI Scholar | College Map Router　　　　　　　　　　　　　　　June 2022 - August 2022
- Developed a full-stack route planner to optimize efficient travel around college campuses with Google Maps API integration.
- Participated in a 4-week intensive computer science summer mentorship program by Google engineers.
- Configured 14 individual coding projects in JavaScript by using concepts such as variables, data types, and functions.

UX STRATEGY & DESIGN
UX Researcher | Ravr Case Study　　　　　　　　　　　　　　　January 2024 - May 2024
- Developed a case study and Figma prototype that addresses the social connectivity challenges faced by college students, providing a platform for interaction and community building.

SHAPESHIFT PROSTHETICS
Co-Founder and Software Engineer Lead | HackNC 2024　　　　　November 2024 - Present
- Designed and developed a platform within 24 hours to enhance prosthetic accessibility, enabling users to generate 3D-printable files for personalized transradial prosthetics.
- Utilized NiceGUI to create a responsive frontend interface, allowing users to input parameters and upload 3D scan files.
- Integrated backend Python functions to process inputs and dynamically render 3D models of the customized prosthetic designs.
- Delivered an innovative, user-friendly solution to empower individuals to create affordable prosthetics at home.

EXPERIENCES

AI/LLM APPLICATIONS AND DEVELOPMENT | Dr. Paul Liu NCSU
Intern　　　　　　　　　　　　　　　　　　　　　　　　　　　　December 2024
- Acquired hands-on experience accessing LLMs via APIs and running models locally for customized use cases, utilizing platforms like OpenAI, Ollama, and Groq to deploy and optimize open-source LLMs.
- Gained proficiency in using Streamlit and Flask frameworks to develop web interfaces for personal LLM applications.
- Developed skills in fine-tuning LLMs for domain-specific tasks and integrating retrieval-augmented generation (RAG) techniques to enhance the relevance and performance of language models.

UNC CSXL | Professor Kris Jordan
Intern　　　　　　　　　　　　　　　　　　　　　　August 2024 - December 2024
- Designed and developed a full-stack, calendar-based UI for open hours editing using Angular, TypeScript, FastAPI, CSS grids, and SQLAlchemy, seamlessly integrating it into an existing production environment.
- Leveraged pre-existing backend APIs for adding and deleting open hours while building new API endpoints to enable editing functionality.
- Implemented support for recurring schedules, allowing administrators to create and schedule open hours for specific days of the week.
- Integrated authentication mechanisms to restrict access to the open hours editor, ensuring only authorized admin users could make changes.

OUTLIER AI
AI Trainer　　　　　　　　　　　　　　　　　　　　　　　　August 2023 - Present
- Evaluate and refine AI-generated responses to ensure accuracy, coherence, and relevance.
- Enhance the readability, factual correctness, and prompt adherence of AI outputs.
- Collaborate with cross-functional teams to improve large language model training methodologies and effectiveness.

THE HELPING HAND PROJECT UNC
Front End Developer | HHP Website　　　　　　　　　　　　　　August 2022 - Present
- Developed and maintained the nonprofit's website, showcasing prosthetic projects and processes.
- Implemented outreach services through interactive forms, enhancing community engagement.
- Integrated interactive 3D elements through Spline 3D.

RESEARCH

Heat Adjustable Smart Skin Sensor
Undergraduate Researcher | Bai Lab UNC　　　　　　　　　　　January 2023 - May 2023
- Developed and implemented code in Python and Arduino IDE to transmit sensor data via Bluetooth Low Energy (BLE) to connected devices.
- Created dynamic, continuously updating graphs to visualize real-time sensor data.

- Collaborated with a multidisciplinary research team to optimize data transmission protocols and improve sensor integration.

TECHNICAL SKILLS

- **Relevant Courses:** Data Structures, Discrete Math, Web Development, UX Strategy & Design, Database Systems, Computer Organization, Files and Databases
- **Programming Languages and Frameworks:** Python, HTML/CSS, Javascript, Java, C, Angular, TypeScript, FastAPI, React, Node.js, Streamlit, Flask
- **Data Management:** MySQL, SQLite, MySQL Workbench, SQLAlchemy
- **Technologies:** Jupyter Notebook, Git, VSCode, IntelliJ IDE, Figma, MATLAB, Autodesk Fusion360, Microsoft Office, Final Cut Pro, OpenAI API, Ollama, Groq API, OnShape
- **Other:** Mandarin Chinese (Fluent)