Vivienne Hnin

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Education

University of North Carolina at Chapel Hill — Chapel Hill, NC

B.A. Computer Science, Minors in Data Science & Neuroscience — *Expected May 2027*

Technical Skills

Languages: C/C++, Java, Python, JavaScript

Frameworks & Tools: React, Node.js, SQL, FastAPI, Git, OpenCV, MediaPipe

Projects

Mars Rover Simulation — Autonomous Navigation System

- Implemented **obstacle-aware navigation** by building an **autonomous path-planning engine** using **A*** and **Dijkstra** in **C++**, enabling efficient route selection on a discretized grid.
- Solved **slow iteration and debugging bottlenecks** by designing a **modular planning + visualization architecture**, enabling rapid debugging of navigation edge cases and faster experimentation.
- Avoided **limited system observability** by implementing a **real-time React visualization**, enabling **interactive, demo-ready simulation** and system-level introspection.

XM-477 Thrust-Vector VTOL Drone — Embedded Control Software

- Prevented **multi-mode flight coordination** by developing **state-driven flight control logic** for **hover, transition, and forward-flight modes** in a VTOL aircraft.
- Reduced **unstable actuation under real-world conditions** by applying **closed-loop feedback control** using **sensor data**, improved flight stability and control responsiveness.
- Prevented **unsafe mode transitions** by integrating **finite-state machine (FSM) logic** with sensor-driven feedback loops to reliably manage flight mode transitions.

Joemama — AI Grocery Planning Agent

- Improved **manual and error-prone grocery planning** by building **Joemama**, an **AI agent** that generates personalized grocery lists based on **user preferences, dietary constraints, and budget considerations**.

Experience

POZzlePiece Inc. (AI-Driven Social Platform, Early-Stage Company) — Jan 2026 – Present

Software Engineering Intern — *Chapel Hill, NC*

- Contributed to **frontend and backend development** of an **MVP social platform**, implemented **production APIs** under early-stage startup constraints.
- Collaborated on **AI-assisted and VR-integrated components**, supported interactive user experiences with emphasis on **modular design**, privacy, and system reliability.

Kenan-Flagler Business School — Aug 2025 – Present

IT Apprentice — *Chapel Hill, NC*

- Resolved **internal routing bottlenecks**, improved **system reliability** for **7,900+ users** during peak instructional hours.
- Diagnosed recurring **A/V, software, and network issues** across classrooms and offices, reduced live-instruction downtime.
- Standardized **troubleshooting documentation** and **escalation workflows**, improved response consistency across the IT team.

MindUnite (Student-Run Startup) — Jan 2025 – Present

Software Developer — *Chapel Hill, NC*

- Shipped **React-based frontend features** using **Tailwind CSS**, improved UI responsiveness in a fast-paced startup environment.
- Collaborated with designers and backend contributors to iterate on features based on **user feedback** and product requirements.

BeReal (Social Media Platform) — Nov 2025 – Dec 2025

Product Management Extern — *Chapel Hill, NC*

- Conducted **A/B testing** and **competitive benchmarking** (Snapchat, Instagram) to evaluate onboarding friction, translating insights from **300+ user data points** into prioritized feature recommendations.

Success Admissions (Largest Education Agency in Southeast Asia) — Feb 2023 – Aug 2023

Partnership Associate — *Yangon, Burma*

- Coordinated and **negotiated partnerships** with international school boards across **four countries**, integrating enrollment data to secure **3+ long-term agreements**.

Nawarat Autoparts (Autoparts Company) — Aug 2021 – Aug 2024

Product Management Intern — *Yangon, Burma*

- Developed a **regional go-to-market strategy** using sales analysis and demand modeling, increasing channel sales by **239%** and reducing transit breakage by **31%** through material testing and failure analysis.