

Ryan Xing

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EDUCATION

Vanderbilt University

B.S. in Computer Science

Nashville, TN

Expected May 2028

Stony Brook University

B.S. in Computer Science | GPA: 3.90 | Dean's List

Stony Brook, NY

Aug 2024 – May 2026

- **Relevant Coursework:** Data Structures, Analysis of Algorithms, Object-Oriented Programming, Systems Fundamentals, Software Engineering, Theory of Computing, Principles of Programming Languages, Probability & Statistics

EXPERIENCE

Full-Stack Developer

June 2024 – January 2026

Incendium Academy

Remote

- Developed a student progress dashboard used by **300+ monthly active users**, reducing page load time by **40%** and cutting navigation friction by **35%**.
- Shipped **50+ interactive STEM modules** and a responsive UI system that increased mobile engagement by **25%** and reduced session drop-off by **20%**.
- Designed an **MDX-based content system** on **Supabase** that let non-technical staff publish curriculum updates without engineering support, eliminating a **2–3 day turnaround**.

PROJECTS

ReCall | *TypeScript, React, Plasmo, Cohere API, Google Gemini, IndexedDB* | [GitHub](#) | [Devpost](#)

- Created a Chrome extension that turns browsing history into a searchable knowledge base, letting users find past pages with **natural-language queries** and explore relationships between visited sites in an **interactive graph**.
- Engineered a **4-stage local ingestion pipeline** for capture, keyword extraction, embeddings, and retrieval, using Cohere reranking and Gemini-based query understanding to return results in under **200ms** without external data storage.

Protocol Tracking iOS App | *Swift, SwiftUI, Firebase Firestore, Combine, Swift Charts* | [GitHub](#)

- Developed an iOS app for tracking **multi-compound protocols**, including **live concentration-over-time visualizations** and validation rules that prevented invalid dosage entries.
- Structured the app with **MVVM** and a repository layer across **6 data-access classes**, using Combine-based real-time sync to separate UI logic from Firebase integration.

Flow State | *Electron, Node.js, Claude Vision API, Claude Text API, ElevenLabs, Jest* | [GitHub](#)

- Developed a macOS desktop app that analyzes screen activity in real time and delivers spoken productivity feedback using an **Electron multi-process architecture**.
- Reduced vision API usage by **~40%** with idle detection on unchanged screens, added **33 Jest unit tests** for core logic, and implemented a transparent click-through overlay with dynamic mouse event handling.

LEADERSHIP & ACTIVITIES

Events & Operations Coordinator

October 2024 – May 2026

SBU Badminton Club

Stony Brook, NY

- Automated tournament registration, bracket generation, seeding, and participant communication with an **AI-assisted workflow**, reducing admin work by **60%**.
- Used the system to help run **15+ events** for **200+ participants** with a **\$3,500+ budget**, increasing freshman participation from **12% to 42%** year over year.

TECHNICAL SKILLS

Languages: Python, Java, TypeScript, JavaScript, Swift, SQL, C/C++, HTML/CSS

Frameworks: React, Next.js, Node.js, Electron, SwiftUI, Flask, Prisma, tRPC, Tailwind CSS

Tools: PostgreSQL, MongoDB, Firebase, Redis, Supabase, Docker, Git, Vercel, Jest