Ejean Kuo

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Education

Northwestern University **Evanston, IL**

BA in English and Computer Science (Concentration: Artificial Intelligence) *June 2027*

- **GPA**: 3.92; Dean's List 6/6 Quarters; Kaplan Institute Scholar
- **Coursework**: Computer Systems (C, x86-64), Artificial Intelligence (Python), AI Narratives (C#), Computer Programming (C, C++), Discrete Mathematics, Human-Computer Interaction, Object-Oriented Programming, Data Structures and Algorithms

Experience

Climate Action Evanston **December 2024 – June 2025**

Software Engineer Intern *Evanston, IL*

- Designed a full-stack tracking form and data display page for a non-profit's website supporting 2500+ users, centralizing data collection & data visualization into one location, cutting redundant manual updates and streamlining staff workflows by 40%
- Led product integration into the existing system by producing clear handoff documentation and iterating on UI/UX design through structured feedback sessions with non-technical staff, ensuring usability across diverse, cross-functional teams
- Developed a RESTful API using Node.js/Express to classify and route volunteer submissions across 6 program areas
- Coordinated Git version control with a team of 6 interns, establishing consistent collaboration and development practices

Department of Computer Science, Northwestern University **May 2025 – Present**

Undergraduate Researcher *Evanston, IL*

- Drove the formalization of 3 core structural properties of strongly regular graphs in Rocq (Coq), implementing definitions and lemmas and writing Gallina code to generate machine-verified examples serving as reusable foundations for further research
- Evaluated methods for extending Python-C++ interfaces of the number theory libraries *primecount* and *primesieve*, with ongoing work to reimplement bindings using nanobind to enhance performance and maintainability

Projects

Ranklit | *Figma, Swift, Supabase, Open Library API* **Summer 2025 – Present**

- Built a full-stack iOS app for book tracking, enabling curated lists and personalized ratings through a pairwise ranking algorithm
- Programmed 2 user-specific lists (Favorites, Want to Read) backed by Supabase RLS and book data from Open Library API
- Developed user authentication flows (Log In/Create Account) with email + username support, syncing data to Supabase

Ejean's Website | *React, JavaScript, HTML, CSS, Vercel* **Fall 2025**

- Constructed a personal website with 6+ features including client-side routing across 5 pages, an interactive email form for direct messaging, animated typewriter text, and downloadable résumé PDFs for a seamless and dynamic user experience
- Deployed site on Vercel with a custom domain and ensured full responsiveness across desktop and mobile devices

Pacman Trainer | *Python* **Summer 2025**

- Trained reinforcement learning and neural network agents to improve decision-making, tuning hidden layer sizes and learning rates to achieve ∼60% higher policy performance over the baseline heuristic agent
- Engineered an A* pathfinding engine with Tkinter visualizations to generate optimal navigation routes for the Pacman agent

CTA Bus Tracker | *C, C++* **Fall 2024**

- Created a navigation tool for an open street map of Evanston, listing the 3 closest buses to a given building with arrival times
- Parsed map files using TinyXML to extract geospatial coordinates and reconstruct shortest building-to-bus-stop paths, designing a MySQL table schema and indexing stop locations for fast spatial lookup and reduced recomputation
- Integrated Chicago Transit Authority's bus API to retrieve real-time bus locations and proximity to bus stops and buildings

Leadership & Extracurricular

Develop & Innovate for Social Change **Spring 2025 – Present**

VP of Finance *Northwestern University*

- Secured 5 grants totaling $6,500 in 2 months, a 160% increase in funding that impacted 135+ students and 30+ industry clients
- Managed purchasing operations via budget tracking, oversight of 4 bank accounts, and streamlined reimbursements

Mock Trial **Fall 2023 – Present**

Collegiate Mock Trial Competitor *Northwestern University*

- Competed at UCLA, Georgetown, and UChicago and won 8th place at AMTA's 2025 National Championship Tournament
- Presented 7-min openings and cross examinations, demonstrating persuasive speaking, quick improvisation, and clear articulation

Technical Skills

Languages: Python, Java, C++, C, Swift, TypeScript, JavaScript, SQL, Assembly (x86-64), HTML, CSS, GAP
Frameworks & Libraries: React, Express, Node.js, SwiftUI, GTest, NumPy, Beautiful Soup
Other: Git, Docker, VS Code, Vercel, Unix, Figma, Supabase, Coq/Rocq, Lean, Excel