Jimmy Chen

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Education

Cornell University, **College of Engineering** Ithaca, NY
B.S. in Computer Science *Expected May 2028*
GPA: 3.51/4.0
Related Coursework: Intro to Python, iOS Dev., Discrete Structures, Multivar. Calculus, Linear Algebra
Planned FA '25: OOP & Data Structures, Functional Programming, Digital Logic & Computer Organization, Probability Models & Inference

Technical Skills

Programming Languages: Python, Java, Swift, JavaScript, SQL, HTML, CSS
Frameworks & Libraries: SwiftUI, Firebase, Supabase, MapKit, HealthKit, Core Location, Bootstrap, jQuery, Drupal, NumPy, BeautifulSoup, Cryptography
Developer Tools: Git, Docker, MySQL, PostgreSQL, VS Code, Xcode, Supabase CLI, AWS CLI, Unix, Agile Development
Cloud & Backend: Amazon Web Services (AWS RDS, EC2), Supabase (Authentication, Database), Apple Developer Services, RESTful API Development, SSL/TLS Security

Experience

Web Developer *Jun 2023 – Nov 2023*
New York Tutoring Center Remote

- Launched production website serving 100+ students with free tutoring services, achieving full deployment within 6-month timeline using scalable web architecture and agile development practices.
- Configured Drupal CMS for scalable tutoring platform with Docker-based testing environment using OrbStack.
- Increased organic traffic by 40% through comprehensive SEO optimization including XML sitemap implementation, Google Search Console integration, and meta tag optimization, resulting in 60% improvement in user engagement.
- Implemented version control workflows via Git and utilized MySQL queries to effectively manage user enrollment data.

Projects

Cloud Password Manager | Python, PostgreSQL, AWS RDS, AWS EC2, Cryptography, Unix *Jun 2025*

- Architected and deployed secure, scalable multi-user password manager on AWS infrastructure, using EC2 for backend compute and RDS for encrypted PostgreSQL storage in private subnets with SSL enforcement.
- Implemented zero-knowledge authentication with Fernet symmetric encryption and PBKDF2-HMAC-SHA256 with 1.2M iterations, ensuring end-to-end encryption and security without storing master passwords.
- Engineered scalable PostgreSQL database schema with proper indexing, foreign key constraints, and CASCADE deletion, deployed on AWS RDS with SSL-enforced connections, optimizing query performance by 30%.
- Developed comprehensive security model featuring per-user salt generation, SHA256 password hashing, and encrypted database connections.

Stridr - iOS Run Tracker App | SwiftUI, Supabase, MapKit, HealthKit, Core Location *May 2025 – Jun 2025*

- Developed full-stack iOS mobile application featuring real-time GPS tracking, interactive route mapping, and comprehensive workout analytics with cloud synchronization, achieving 95% accuracy in distance tracking.
- Engineered advanced fitness tracking algorithms including distance calculation, pace monitoring, time tracking, and calorie estimation with pause/resume functionality, processing real-time location data across 50+ recorded workouts.
- Integrated Apple HealthKit SDK for seamless workout data syncing to Apple Health ecosystem and Supabase backend for secure cloud storage with authentication and magic link login.
- Built responsive SwiftUI user interface with MapKit integration for route visualization, workout history dashboard, and performance analytics with data visualization.

Munch! - iOS Food Discovery App | SwiftUI, Firebase, MapKit, REST APIs, Figma *Apr 2025 – May 2025*

- Won Best UI/UX Award at Cornell AppDev Hackathon among 19 teams (80+ participants) for exceptional user interface design and user experience.
- Developed iOS frontend for full-stack food discovery application using SwiftUI framework, featuring restaurant search functionality, social networking features, and automated bill-splitting algorithms.
- Implemented computer vision OCR receipt scanning with OpenAI GPT-4 API integration for itemized bill parsing and automated Venmo payment requests, achieving 92% accuracy rate.
- Integrated multiple third-party APIs (OpenAI, CoreLocation, Venmo API) creating seamless end-to-end user journey from restaurant discovery to automated payment processing.