Jimmy Chen

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jimmychen02.github.io/JimmyChenPortfolio/

Education

Cornell University, **College of Engineering** — Ithaca, NY
B.S. in Computer Science — *Expected May 2028*
GPA: 3.51/4.0
Relevant Coursework: OOP & Data Structures, Functional Programming, Digital Logic & Computer Organization, Discrete Math, Probability, Intro to Python, iOS Development, Linear Algebra, Multivariable Calculus

Technical Skills

Programming Languages: Java, Python, Swift, JavaScript, SQL
Backend & Systems: REST API Dev., Multithreading, Concurrency, TCP Networking, Socket Programming, SSL/TLS, CI/CD
Cloud & DevOps: AWS (EC2, S3, RDS, IAM), PostgreSQL, MySQL, Supabase, GitHub Actions
Tools & Frameworks: React, FastAPI, Tailwind, Docker, Git, VS Code, Unix/Linux, Firebase, SwiftUI, NumPy, BeautifulSoup

Experience

Web Developer Intern — *Jun 2023 – Nov 2023*
New York Tutoring Center — Remote
- Launched production tutoring site for 100+ students within 6 months using scalable web architecture and Agile sprints
- Configured Drupal CMS with Docker for local development and testing environments; streamlined deployment
- Increased site traffic by 40% and engagement by 60% through SEO improvements including sitemap, metadata, and Google Search Console
- Managed user data with MySQL and implemented Git workflows for version control and team-based development

Projects

Dropbox Lite ⧉ | React, FastAPI, AWS S3, Tailwind, Docker — *Jun 2025 - Jul 2025*
- Designed and implemented RESTful APIs using FastAPI to support secure, scalable file storage and retrieval for multiple users, leveraging AWS S3 for cloud persistence and data isolation
- Implemented token-based authentication and presigned S3 download links to enforce per-user data isolation and secure file access
- Developed efficient backend endpoints for concurrent uploads/downloads and real-time file listing, supporting instant access to user files and usage statistics

Multithreaded Chat Server ⧉ | Java, TCP Sockets, Multithreading, Concurrency — *Jun 2025*
- Developed a scalable Java chat server with thread-per-client architecture, supporting 50+ users and real-time message broadcasting/private messaging (/whisper, /list, /nick, /quit)
- Implemented asynchronous I/O and robust connection lifecycle management, ensuring fault tolerance and clean resource utilization
- Leveraged TCP socket programming and ConcurrentHashMap for thread-safe operations, advanced command parsing, and seamless extensibility to distributed architectures

Cloud Password Manager ⧉ | Python, PostgreSQL, AWS (EC2, RDS), Cryptography, Unix — *Jun 2025*
- Built a secure, multi-user password manager on AWS (EC2 + RDS) with zero-knowledge authentication using Fernet encryption and PBKDF2-HMAC-SHA256 with 1.2M iterations and per-user salts
- Designed scalable PostgreSQL schema with indexing, foreign keys, and CASCADE deletes; enforced SSL/TLS and improved query performance by 30% through optimized data modeling

Stridr - iOS Run Tracker App ⧉ | SwiftUI, Supabase, MapKit, HealthKit, Core Location — *May 2025 – Jun 2025*
- Developed full-stack iOS app with real-time GPS tracking, HealthKit sync, and Supabase backend for secure authentication (including magic link login) and cloud storage; achieved 95% distance accuracy
- Built a SwiftUI dashboard with MapKit-based route visualization and performance analytics for pace, time, and workout history across 50+ sessions

Munch! - iOS Food Discovery App ⧉ | SwiftUI, Firebase, MapKit, OpenAI API, Venmo API — *Apr 2025 – May 2025*
- Won Best UI/UX at Cornell AppDev Hackathon (19 teams); built SwiftUI iOS app with GPT-4 OCR receipt parsing and automated Venmo bill-splitting
- Integrated third-party APIs (OpenAI, CoreLocation, Venmo) for seamless restaurant discovery-to-payment flow; achieved 92% accuracy in itemized parsing