

Malcolm Ripp

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EDUCATION

University of Illinois at Urbana-Champaign

GPA: 3.75

B.S. in Computer Science; Accelerated M.S. in Computer Science

B.S. May 2027, M.S. May 2028

- **Coursework:** Data Structures, Data Science Exploration, Applied Parallel Programming, Algorithms & Models of Computation, Computer Architecture, Software Design Lab, Discrete Structures, Numerical Methods
- **Organizations:** CUBE Consulting, ACM, Flippin Illini

EXPERIENCE

Wayfair

Boston, MA

Data Engineering Intern

June 2026 – Present

- Built an end-to-end competitor intelligence pipeline using **Python, GCP, Vertex Gemini, Airflow, and dbt**
- Created **55+ ingestion modules** and **1,900+ test lines** for confidence-gated BigQuery strategy data
- Deployed a **7-stage Composer DAG** producing **3–5 executive spotlights** from **27+ curated strategies**

C22 Tech

Chicago, IL

Full-Stack Developer

June 2025 - Sep 2025

- Designed an event website for **100+ attendees** using JavaScript, improving registration efficiency
- Built normalized **SQL schemas** to support fast client lookups, minimizing manual data retrieval time internally
- Added **RESTful APIs** to decouple frontend and backend logic, reducing code duplication by **~30%**

Everyone Can Code Chicago

Chicago, IL

Technical Teaching Assistant

June 2025 - Aug 2025

- Mentored **15+** college students in designing and prototyping iOS applications using Xcode and SwiftUI
- Reviewed architectures and integrated DeepSeek via REST APIs, improving feature responsiveness by **20%**
- Guided teams in delivering investor-ready Keynote presentations, contributing to a **top 4** finalist finish

Software Engineering Intern

Sep 2024 - Dec 2024

- Built a computer vision pipeline to classify skin conditions, achieving **95%** validation accuracy
- Integrated ML model into an iOS app using **Swift**, enabling end-to-end classification for **500+** beta test cases
- Authored PR/FAQ memos to scope features and prioritize engineering tradeoffs prior to App Store submission

PROJECTS

Full-Stack Fact-Checking Software System – Live Check

Sep 2025 – Dec 2025

- Built a full-stack system to fact-check YouTube videos using FastAPI to analyze over **10k+** video transcripts
- Designed a chunked, parallel processing pipeline, reducing average response latency by **40%** for low-latency results
- Implemented **Redis** caching and **Dockerized** backend services for improved performance and reliability

Automated OCR-Driven Game Control System – Word Hunt Bot

Dec 2024 – Feb 2025

- Built an iOS automation bot in Python using Appium to solve and interact with Word Hunt puzzles in iMessage
- Implemented OCR-based board recognition using Tesseract, extracting letters into a dictionary w/ **~99%** validity
- Optimized swipe path generation, reducing input hesitation and completing solutions in **<1 second**

AI-Driven Document-to-SOP Pipeline – Squint x CUBE Consulting

Feb 2026 – May 2026

- Delivered a Gemini-powered document parsing pipeline that transformed **20+ unstructured PDFs, manuals, and text files** into structured JSON for Squint's platform, raising overall extraction accuracy to **90%+**
- Translated **50K+ words** of complex procedural content into clear, operator-ready SOP outputs, improving documentation usability and demonstrating strong technical communication skills

TECHNICAL SKILLS

Programming Languages: C++, C#, CUDA, Python, Swift, Java, SQL, JavaScript/TypeScript, Verilog, MIPS, Tableau, HTML, R, React, NodeJS, Linux, Vue, Go, Spring, Azure, YAML

Frameworks & Tools: Xcode, SwiftUI, REST APIs, Computer Vision, Delta Supercomputer, Slack, Agile, Cloud Infrastructure, Apache Airflow, GCP, BigQuery, Kubernetes, Buildkite, dbt, GCC, OpenCV, pandas, Matplotlib

Developer Tools: Docker, Redis, Appium, Postman, Xcode, VS Code, Cursor, Devin

Awards: Top 3, Wayfair Internal Hackathon

Certifications: Aviatrix Certified Engineer (ACE) - Associate, Aviatrix - February 2026