

Michael Vertin  
Software Engineer | Computer Science Graduate  
480-370-7702 | [mikevertin64@gmail.com](mailto:mikevertin64@gmail.com) | [linkedin](#) | [github](#) | [portfolio](#)

## Summary

Computer Science graduate with strengths in algorithm optimization, scalable systems, and debugging. Rapid learner with proven success in competitions and projects, with experience deploying production-ready apps using Python, React, Flask, and Docker. Excited to apply and expand my skills in real-world software development.

## Education

Northern Arizona University

Fall 2020 – Spring 2025

B.S. in Computer Science, Minor in Mathematics and Electrical Engineering

GPA: 3.73, Dean's List

## Skills

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

Frameworks/Libraries: React, Flask, Node.js, Angular, Spring, JUnit, Javalin, Socket.IO

Databases/APIs: SQL, REST APIs, HTTP APIs, JDBC

Tools/Platforms: Git/GitHub, Docker, Docker Compose, AWS EC2, Linux

Core Skills: OOP, Debugging, Optimization

## Experience

### AI Code Reviewer - Data Annotation Tech

June 2025 - Present

- Designed programming prompts and tests to evaluate large language model (LLM) code generation.
- Conducted code reviews across Python, Java, C++, and JavaScript, identifying logic flaws, runtime errors, and inefficient implementations, and ensuring best practices (OOP, data structures, algorithm efficiency) are followed.
- Analyzed debugging and optimization techniques to validate software solutions and improve code quality.

### Image Similarity Search ([Capstone Project](#)) - Northern Arizona University

Fall 2024 - May 2025

- Similar to an internship, I worked in a team with NAU's Cline Library to deliver an image retrieval system.
- Contributed in weekly client and mentor meetings to gather requirements and ensure on-time delivery.
- Enabled retrieval across 100,000+ archive documents using feature extraction and inner-product similarity.
- Deployed containerized backend/frontend on AWS EC2 for scalable, maintainable operation.

### Teacher's Assistant - Northern Arizona University

Jan 2023 - May 2024

- Evaluated 3-5 programming projects weekly, reviewing code for correctness, readability, and coding style.
- Produced detailed written feedback explaining issues, their impact, and recommended fixes, often clarifying theoretical CS concepts in context.
- Assessed 100+ projects, strengthening my ability to recognize effective coding patterns and common pitfalls.

## Projects

### Word Search Optimization | Python | [Github](#)

- Won 1st place in class competition (~30 participants) after improving search performance by 550%-1300% over other submissions through targeted data structure optimizations and controlled set insertion order.
- Applied probabilistic analysis to safely skip over complex insertions with high resource costs.

### Halma Game Tournament | Python | [Github](#)

- 1st place in class AI tournament with a self-adjusting depth algorithm that adapted in real time.
- Optimized alpha-beta pruning by shallow-sorting recursion order, reducing non-optimal evaluations.