



# Michael Nugent

Software Engineer

## Contact

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## Summary

Recent college graduate with a Bachelor's degree in Computer Science possesses strong academic foundations in Software Engineering, Web Development, and AI. Industry-relevant work experience comprises three months as a tech recruitment company trainee. Currently seeks to contribute knowledge, skills, and talents to software projects as junior-level engineer.

## Education

Computer Science, BS      California State University, Fresno      2022      magna cum laude (3.7 GPA)

## Academic Projects

### Web Development – “Gomoku”

- Used LAMP stack, HTML, CSS, JavaScript, PHP, and MySQL to implement a local front-end client and back-end server to achieve database CRUD operations: user registration and login, game victory record updates, and fetches.
- Used object-oriented programming logic to enable complex game play.
- Refactored project to be a single-page application with a Model-View-Controller architecture that uses the React framework, and Google Firebase's NoSQL Firestore database.

### Software Engineering – “RoadMap”

- As part of an Agile team, designed and built an academic guidance web application for students.
- Established system requirements and implemented unit and integration tests through the Jest framework.
- Created UML class, sequence, and use-case diagrams.
- Practiced SOLID principles to achieve code readability and maintainability.

### Artificial Intelligence – “Puzzle Slider”

- Implemented a state space search algorithm to efficiently identify the shortest path to a puzzle's solution.
- Optimized code to reduce domain's search time complexity from exponential to linear.
- Used heuristics to discount path costs and prioritize higher probability branches.

### Artificial Intelligence – “Evolutionary Algorithm”

- Implemented a biology-inspired algorithm to solve the N Queens problem.
- Explored and documented inferiority of brute force machine power against problem specific method.

## Skills

- Web Development: LAMP, (Linux, Apache, PHP, MySQL), MERN, (MongoDB, Express, React, Node), Full Stack, JavaScript, HTML, CSS, NoSQL, REST, and CRUD.
- Software Engineering: C, C++, Java, Cohesion/Coupling, SOLID Principles, Testing, UML Diagrams, and Architectures (MVC).
- AI: State Space Search, Heuristics, Evolutionary Algorithms, Adversarial Search
- Soft: Work Ethic, Teamwork, Communication, Problem-Solving, Critical & Creative Thinking, Time Management, and Empathy.

## Work Experience

02/2024 – 06/2024 | Software Engineer Trainee / Automotive Engineer | Revature, Reston, Virginia (Remote)

- Completed SWE training in OOP languages, SOLID, database normalizations, and Java Spring Boot.
- Studied electronic control units, CAN bus, and circuitry to fill client company's automotive needs.
- Client company canceled project and consequently Revature contract due to cost reduction measures.