Nicholas A. Laviano

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SUMMARY

Software Engineering student with experience in software design, refactoring, and quality assurance. Strong foundation in UML modeling, SOLID principles, unit testing, and maintainable code. Experienced working in team-based Git workflows and delivering real client website solutions. Seeking internships in software engineering, QA, or security-focused roles.

EDUCATION

Bowling Green State University   **Bowling Green, Ohio**
B.S. in Software Engineering   *Expected Graduation, May 2026*
   o   **GPA:** 3.75/4.00, *Dean's List*
   o   **Related Coursework:** Data Structures & Algorithms, Software Architecture & Design, Software Testing & Quality Assurance, Database Management Systems, Operating Systems, Network Architecture & Applications, Web Application Development

EXPERIENCE

Zone Aviation   **Elyria, Ohio**
Website Designer   *July 2025 – Present*
   ● Added SSL certificates, managed cPanel backups, and safely tested updates locally before deployment.
   ● Fixed broken links, updated content and images, and improved navigation and usability.
   ● Gained hands-on experience with WordPress, Namecheap, cPanel, and website security practices.

Chipotle   **Bowling Green, Ohio**
Certified Trainer   *June 2022 – Present*
   ● Trained new employees on procedures and quality standards in a fast-paced environment.
   ● Balanced 16+ hours/week of work with full-time coursework, demonstrating strong time management and reliability.

PROJECTS

Open-Source Unit Testing Contributions
   ● Wrote 10 unit tests for real Java open-source libraries (AssertJ and Apache Commons Text) using JUnit and Maven.
   ● Applied testing techniques including equivalence partitioning, boundary value testing, black-box testing, and mocking with Mockito.
   ● Contributed via forks, branches, commits, and pull requests following CI and contribution guidelines.

Chart Generator Software Design
   ● Designed a command-line chart generation system using use cases, UML diagrams, and sequence diagrams.
   ● Created a full class diagram and analyzed subsystem cohesion and coupling.
   ● Applied SOLID principles and design patterns to improve extensibility and maintainability.

C++ Refactoring Case Study
   ● Refactored an existing C++ codebase using catalog-based refactoring techniques.
   ● Applied Extract Method, Move Method, and Replace Type Code with Subclasses to improve responsibility placement.
   ● Introduced polymorphism and improved cohesion across Account, Video, and Stream classes.
   ● Worked in a team using issues, topic branches, pull requests, and code reviews.

Autonomous Vehicle Safety Analysis
   ● Conducted a technical research study on autonomous vehicle safety under adverse weather and network conditions.
   ● Analyzed real-world case studies (Tesla, Waymo, Cruise) and system-level failure scenarios.
   ● Evaluated V2X communication, latency, and edge computing impacts on safety-critical systems.
   ● Produced a comprehensive technical report synthesizing academic and industry research.

SKILLS

Languages: C++, Java, C#, JavaScript, HTML/CSS, SQL
Testing & Quality: JUnit, Catch2, Refactoring, CI
Tools: Git, Maven, CMake, VS Code, IntelliJ, WordPress, cPanel, Namecheap
Concepts: OOP, SOLID, UML, Cohesion & Coupling, Software Design, Debugging