# ZACHARY NICHOLAS

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## PROFESSIONAL SUMMARY

Versatile Software Engineer with a Bachelor of Science in Computer Science and multiple cybersecurity certifications. Experienced in designing scalable backend applications and full-stack dashboards using Java, Spring Boot, Flask, and PostgreSQL. Skilled in RESTful API development, secure session handling, multithreaded scripting, and structured debugging workflows. Built cross-language project repositories to explore C++, Rust, Python, Go, and PowerShell. Committed to clean code, collaborative development, and delivering practical solutions in Agile environments.

## TECHNICAL SKILLS

- **Programming Languages & Frameworks:** Java, Spring Boot, Python, Flask, PowerShell, C++, JavaScript, Rust, Go, Bash, HTML/CSS, TypeScript
- **Backend Development & APIs:** Microservices Architecture, RESTful API Design, Input Validation, Secure Authentication, Session Management, Flask Routing, Error Handling, JSON/CSV Processing
- **Database Technologies:** PostgreSQL, SQLite, MongoDB (Academic), Relational Schema Design, Data Transformation, Query Optimization
- **Testing & Debugging Tools:** JUnit (Academic), Manual API Testing (Postman), Conditional Logic Branching, Logging Automation, Exception Tracing
- **Version Control & DevOps Fundamentals:** Git, GitHub, GitLab (Exploratory), Docker (Basic), CI/CD Workflow Simulation, Agile Methodologies, Jira (Conceptual)

## CERTIFICATIONS

- CompTIA A+, Network+, Security+, CySA+ (Valid through Apr 2028)

## EDUCATION

### Bachelor of Science in Computer Science

Southern New Hampshire University · Graduated Dec 2024 · GPA: 3.797

## EXPERIENCE

### Software Development Projects

*Academic & Personal Projects · Jan 2020 – Present*

- Built Flask-based dashboards with live API integration, real-time PostgreSQL storage, and dynamic map rendering (Flight Tracker)
- Developed SecureStack Toolkit in Python and PowerShell — a threaded CLI utility for log parsing, configuration auditing, and system diagnostics
- Created RESTful service prototypes with Java and Spring Boot, practicing secure session management and role-based access control
- Explored assembly and memory access through language playgrounds (x64, Python, Go, Rust), documenting findings for public GitHub learning repos
- Authored clean, modular code and markdown-based guides across GitHub to support reproducibility and collaboration

### United States Marine Corps · Heavy Equipment Mechanic

*May 2017 – Aug 2021*

- Conducted structured diagnostics across mechanical and electrical systems under time-sensitive conditions
- Managed secure asset tracking workflows using GCSS-MC and DoD-standard processes
- Mentored junior team members in troubleshooting and systematic repair logic

### Technical Projects

**Live Flight Tracker:** Full-stack Flask app fetching and transforming API data into dynamic map views with PostgreSQL-backed scheduling and logging.
**SecureStack Toolkit:** Multithreaded CLI suite for endpoint diagnostics and misconfiguration detection using Python and PowerShell.
**Language Playgrounds:** Maintained public repositories documenting C++, Rust, Go, Assembly, and Python experiments with input/output, memory models, and control flow.