

GARVIN PATEL

Software Developer | Computer Science Student

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PROFESSIONAL SUMMARY

Computer Science student with a strong technical foundation in full-stack development, IoT systems, and software engineering. Demonstrated ability to design and implement end-to-end solutions through hands-on experience teaching web development, building IoT applications, and modernizing nonprofit websites. Proficient in Python, Java, C++, and modern web technologies with proven success in improving system performance and user experience. Seeking software development opportunities to apply technical skills and problem-solving abilities.

EDUCATION

Bachelor of Science in Computer Science | Minor in Entrepreneurship

Northern Kentucky University | Highland Heights, KY | Expected Dec 2026 | GPA: 3.7/4.0

PROFESSIONAL EXPERIENCE

Operations & Automations Intern

Blue North | Covington, KY | April 2026 – Present

- Designing and building automation systems to streamline internal business operations, leveraging tools such as n8n, Zapier, and Make to reduce manual workload across reporting, compliance, and community program workflows
- Developing internal AI-powered tools using LLM APIs (OpenAI, Anthropic Claude) to support entrepreneurship programs and operational decision-making for staff and community members
- Maintaining data infrastructure and internal dashboards that power Blue North's reporting, compliance tracking, and community program analytics, ensuring data integrity across integrated systems
- Collaborating across technical and operational teams at the intersection of software development, data systems, and entrepreneurship support, documenting processes and workflows to ensure long-term maintainability

Teaching Assistant – Web Development Course

Northern Kentucky University | Highland Heights, KY | August 2025 – December 2025

- Mentored 10+ undergraduate students in mastering HTML5, CSS, JavaScript, and responsive design principles, resulting in 90% of students achieving B+ or higher grades
- Facilitated live coding sessions and debugging workshops during lectures, helping students troubleshoot complex issues with DOM manipulation, CSS flexbox/grid layouts, and JavaScript asynchronous programming
- Evaluated 12+ student projects and assignments weekly, providing detailed code reviews focused on web accessibility (WCAG 2.1), semantic HTML, and industry best practices
- Collaborated with course instructor to develop supplementary learning materials and refine curriculum content, improving student engagement by 25% based on course feedback surveys

TECHNICAL PROJECTS

Smart Parking Availability System (IoT) | Academic Project

Northern Kentucky University | Spring 2026

GitHub: <https://github.com/garvin-patel/CSC494-project>

- Developing end-to-end IoT solution to display real-time parking availability for campus garages, utilizing Arduino Nano, ESP32-C6 wireless module, and TMP102 I2C sensor for data collection
- Implementing full-stack architecture with Arduino C/C++ for microcontroller programming, Node.js/Express backend API for data processing, MongoDB for storage, and React frontend for user interface
- Engineering wireless data transmission pipeline from ESP32-C6 to cloud backend via HTTP/MQTT protocols, ensuring reliable communication and data integrity across distributed system components
- Designed system to reduce student parking search time and garage congestion by providing availability status before entry, following agile development methodology with incremental testing and integration

Nonprofit Library Website Redesign | Volunteer Developer

Personal Project | 2024

GitHub: <https://github.com/DillonCarpenter/INF286-Final-Group-Project>

- Redesigned and developed modern, mobile-responsive website for local nonprofit library using vanilla JavaScript, HTML5, and CSS, improving mobile usability scores from 62 to 94 on Google Lighthouse
- Restructured site architecture and implemented intuitive navigation system, reducing average user click-depth by 40% and improving content discoverability for 500+ monthly visitors
- Optimized page load performance through image compression, lazy loading, and minified assets, achieving 65% faster load times (3.2s to 1.1s average) and improving SEO ranking from page 3 to page 1 for key search terms
- Conducted stakeholder interviews to gather requirements and iteratively refined designs based on user feedback, ensuring alignment with organizational mission and user needs

TECHNICAL SKILLS

Programming Languages: Python, Java, C++, JavaScript, SQL, HTML, CSS, Arduino C/C++

Technologies & Frameworks: Node.js, Express, React, MongoDB, MySQL, RESTful APIs, MQTT, Git/GitHub

Tools & Platforms: VS Code, IntelliJ IDEA, Arduino IDE, Responsive Design, Agile/Scrum Methodology

Hardware & IoT: Arduino Nano, ESP32, I2C Communication, Sensor Integration, Wireless Protocols (WiFi, BLE)

Languages: English, Hindi, Gujarati, Spanish