David Nguyen

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Education

University of Michigan **Expected Graduation: May 2027**

B.S.E. in Computer Science *Ann Arbor, MI*

GPA: 3.6/4.0 | **Awards:** Engineering Dean's List, University Honors

Relevant Coursework: Data Structures and Algorithms, Operating Systems, Web Systems, Object Oriented Programming, Computer Architecture, Logic Design, Discrete Math, Probability, Linear Algebra, Multivariable Calculus

Organizations: Michigan Hackers, Michigan Data Science Team, Institute of Electrical and Electronics Engineers (IEEE)

Experience

Roadsr **October 2025 - Present**

Software Developer *Ann Arbor, MI*

- Integrated a CI/CD pipeline using GitHub Actions to run automated test suites concurrently with live applications, improving build reliability, early defect detection, and deployment confidence across Python-based systems
- Implemented automated collision detection tests to validate Time-to-Collision alert thresholds across speed- and distance-dependent edge cases, leveraging Python, Pandas, NumPy, and OpenCV to improve system robustness and real-time reliability

VOID Tech **January 2025 - April 2025**

Software Developer *Ann Arbor, MI*

- Collaborated with a team of 3 engineers to design a backend infrastructure for a subscription-based streaming platform, enabling users to stream God Said Give 'Em Drum Machines using TypeScript and AWS Amplify for scalability
- Implemented authentication and authorization account management using AWS Cognito for secure sign-ups/logins and tracked user subscriptions status via AWS DynamoDB with PostgreSQL for gated media access
- Integrated a video streaming infrastructure using MUX with signed URLs and thumbnail tokens to address authorized access concerns for paid users

N2K **November 2023 – July 2024**

IT Intern *Fulton, MD*

- Developed an internal website using HubSpot and Adobe Photoshop to advocate 20% of the company to acquire the ISC2 Certified in Cybersecurity certification for higher organizational cybersecurity credibility in the IT industry
- Organized client data using Python and Pandas to export client data into readable CSV files and audited company's self-diagnostic products for simpler data analytics to acquire over $200,000 from partnered companies and clients
- Contributed to the development of cloud computing and cybersecurity online courses to assist their clients for IT examinations and earn certifications

Projects

Trading Bot | *C++, Python, PyTorch, FastAPI, React.js, TypeScript, PostgreSQL*

- Architected a NASDAQ trading bot with responsive UI featuring charts with adjustable stop-loss values and statistics with execution metrics such as net profit and win rate percentage, backed by PostgreSQL for historical trade data
- Integrated a low-latency C++ backend for trade execution with AI-driven reasoning and NASDAQ market forecasting using the OpenAI API and Hugging Face, enabling detailed strategy analysis and planning

Habitat AI | *React.js, Next.js, RestAPI, TypeScript, Mastra*

- Developed backend services in Node.js integrating Mastra AI agents and Gemini API to auto-generate an infinitely expanding knowledge graph, dynamically creating related topics from any root node and powering real-time visualization
- Built a Chrome extension to scrape external content and import it as central nodes, enabling users to expand from real-world sources; enhanced exploration by displaying definitions, links, and videos on hover for immediate context

Ineedio | *React.js, TypeScript, Supabase*

- Built a responsive internship tracker fullstack application with leaderboard and dashboard analytics, helping users track applications in real time with 10 developers to assist users' ability to organize their applications in a competitive setting
- Designed a dashboard page using Supabase for users to easily implement their own internship information efficiently and view the amount of active applications, total applications in a current time span, acceptance rate, and rejection rate

Spotify Analysis | *Python, Pandas, NumPy, Matplotlib*

- Developed a recommendation engine using Spotipy to analyze top artists, genres, and listening duration, to suggest songs with similar listening patterns with other users using Matplotlib to assist the user discover trends and preferences

Skills

Languages: C/C++, Python, TypeScript, HTML/CSS/JavaScript, MATLAB, Assembly, Verilog

Technologies: React.js, Next.js, Tailwind CSS, PostgreSQL, PyTorch, FastAPI, Pandas, NumPy, Git, Linux, AWS, Azure

Certifications: AWS Cloud Practitioner, Microsoft Azure Fundamentals, ISC2 Certified in Cybersecurity