Tyler Guest

Software Developer

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Software developer with strong skills in C++, Python, and full-stack development. Passionate about building scalable tools, from audio plugins to modern web applications. Blending creative design experience with a rigorous computer science foundation.

Technical Skills

Languages: C++, Python, JavaScript, Typescript, SQL, HTML, CSS
Libraries/Frameworks: React, Next.js, JUCE, PyTorch, NumPy
Databases: Supabase
Tools: Git, GitHub, Visual Studio Code, Vercel
Operating Systems: Ubuntu 24.04.2, Windows 11

Technical Projects

dashtools https://dashtools.vercel.app/
• Modern productivity dashboard with multi-window UI built using Next.js, React, and Supabase deployed on Vercel.
• Features draggable, resizable apps (Calendar, Notes, Chatbot, etc.) designed for efficient multitasking.
• Real-time authentication, persistent cloud storage, and responsive design for guest and signed-in users.

megatensor https://github.com/tylerguest/megatensor
• Lightweight Python tensor library with autograd and neural network operations.
• Intuitive API for tensor creation, mathematical operations, and autograd, designed for research and educational use.
• Modular design with extensible layers, optimizers, and loss functions for training custom ML models.

4kverb https://github.com/tylerguest/4kverb
• Real-time reverb VST plugin built in C++ with JUCE, enabling high-fidelity stereo audio processing.
• Custom UI with channel strip–style controls for intuitive sound shaping.
• Optimized delay-based DSP algorithms for minimal latency and efficient CPU performance.

Education

University of Michigan - Flint, MI
Bachelor of Science in Computer Science
2023 - 2027

GPA: 3.89 / 4.0
Honors & Awards: Dean's List (2023-2025), Sonya Carson Scholarship (2024-2025),
Relevant Coursework: Data Structures, Operating Systems, Computer Architecture, Discrete Structures, Database Design

Work Experience

We Can Do It Graphics - Flint, MI
Retail Manager / Graphic Designer
2015 - 2023

• Led a 5-person team, overseeing project workflows and optimizing resources to improve operational efficiency.
• Managed end-to-end production of graphic materials, ensuring high-quality outputs while meeting tight deadlines.
• Utilized Adobe Photoshop, Illustrator, and wide-format printing tools to design and produce custom graphics for clients.
• Implemented process improvements that enhanced productivity and reduced turnaround times.
• Developed client-facing solutions, handling consultations and custom orders to align with branding needs.