Tyler Guest

Computer Science Major / Software Developer
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Technical Skills

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

Projects

dashtools | https://github.com/tylerguest/dashtools
- Modern web productivity dashboard built with Next.js, React, and Supabase for seamless cloud-backed workspace management.
- Multi-window UI with draggable, resizable apps including Notes, Chatbot, etc. designed for efficient multitasking.
- Minimal, responsive design with real-time authentication and persistent storage, supporting both signed-in and guest users.

megatensor | https://github.com/tylerguest/megatensor
- Lightweight tensor computation library implemented with Python, supporting automatic differentiation and neural network operations.
- Intuitive API for tensor creation, mathematical operations, and autograd, designed for research and educational use.
- Modular architecture with extensible layers, optimizers, and loss functions for building and training custom machine learning models.

4kverb | https://github.com/tylerguest/4kverb
- Real-time reverb VST plugin built with C++ using the JUCE framework, 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   **Flint, MI**
Bachelor of Science in Computer Science   *2023 - 2027*
GPA: 3.89 / 4.0 (as of 5/23/25)

Coursework: MTH 121 Calculus 1, CSC 137 Fundamentals of Unix, CSC 175 Problem Solving & Programming I, CSC 275 Problem Solving & Programming II, CSC 230 Intro to Discrete Structures, CIS 314 Computer Ethics, CSC 365 Computer Architecture, CSC 375 Data Structures, CSC 377 Operating Systems, CSC 384 Database Design

Work Experience

We Can Do It Graphics   **Flint, MI**
Retail Manager / Graphic Design Lead   *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.