Mathieu Dombrock

Software Developer

Results-driven Software Developer with over 7 years of experience in designing and implementing innovative software solutions across diverse industries. Strong background in web technologies, embedded systems and audio programming, with a passion for leveraging technology to solve complex problems. Seeking to contribute expertise in a dynamic team environment.

Contact Info

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Professional History

WolffAudio

Senior Software Developer | 07/2023 - 07/2025 | Goleta, California

- **Led the development** of a cross-platform "hub" application utilizing **Zeroconfig networking**, enabling seamless user connectivity to local WolffAudio devices.
- **Collaborated with cross-functional teams** to enhance user experience and optimize application performance.

TurnAround Factor

Software Developer | 12/2021 - 07/2023 | Richmond, Virginia

- **Engineered an embedded system** leveraging augmented-reality technology to assist the US military in troubleshooting hardware in-field, improving operational efficiency.
- **Conducted rigorous testing** to ensure reliability and performance under various conditions.

Twelve23

Senior Software Developer | 09/2019 - 10/2022 | Seattle, Washington

- **Designed and implemented** a 3rd-party seller dashboard that aggregated, analyzed, and summarized extensive data from Amazon's seller APIs, enhancing data accessibility for users.
- **Mentored junior developers**, fostering a collaborative environment and promoting best practices in software development.

Nebula Cyber Solutions

Software Developer | 04/2018 - 09/2019 | Bellingham, Washington

- **Performed comprehensive security audits** on WordPress websites, identifying vulnerabilities and implementing solutions to enhance security.

- **Assisted in on-premises security auditing**, contributing to improved client security protocols.

Freelance Developer

Software Developer | 04/2015 - 09/2019 | Bellingham, Washington

- **Developed custom websites and mobile applications** for small businesses and startups, tailoring solutions to meet specific client needs and objectives.

Why Me?

- **Diverse Industry Experience:** Proven track record across multiple domains, from embedded systems to web technologies.
- **Cross-Platform Expertise:** Developed and maintained software for all major operating systems, ensuring broad compatibility.
- **Strong Linux Background:** Over a decade of experience using Linux as a primary development environment.
- **Startup Mentality:** Understand the challenges of launching projects and thrive in fast-paced, dynamic environments.
- **Data-Driven Solutions:** Experienced in handling large datasets and implementing complex, math-heavy logic flows.
- **Leadership Skills:** Demonstrated ability to lead small teams and manage projects of varying sizes.
- **Commitment to Quality:** Passionate about clean code, thorough documentation, and effective communication.

Skill Areas

- **Web Technologies:** Proficient in both high and low-level web development, covering front-end and back-end technologies.
- **Audio Programming:** Expertise in low-level audio programming and audio DSP.
- **Graphics Programming:** Experience with SDL and GPU shaders.
- **Networking:** Knowledgeable in networking protocols including MDNS/Bonjour.
- **Debugging / Optimization**: I know my way around debuggers and flame graphs. I know what makes software slow and I know how to make it fast.

Major Languages

- **Typescript/JavaScript**
- **C++**
- **C**
- **Lua**
- **Python**

Major Technologies

NodeJS, Postgres / MySQL, Redis, Electron, React, Vue, Svelte, Podman / Docker, REST APIs, MDNS, WebRTC, Low-level network protocol design, NGINX, Unit testing, Mobile and desktop app development.

Personal Projects

MoonForge

[GitHub Repository](#)

Technologies Used: C, Lua

- Developed an audio DSP lab written in C. It's scripted via it's built-in Lua interpreter using the [MF Lua API](#).

RoundRobin

[Product Link](#)

Technologies Used: C++, RP2040 (RPI Pico)

- Aided the Magpie Pedals team in development of a hardware synthesizer called "RoundRobin". This was non-paid work done in my free time.

Wifi-Clock

[GitHub Repository](#)

Technologies Used: PlatformIO, C/C++, HTML/JS/CSS

- Developed a WiFi-enabled alarm clock with features such as soft AP for WiFi configuration, web-based UI, automatic state syncing, and real-time weather updates.

MatrixGL

[GitHub Repository](#)

Technologies Used: PlatformIO, C/C++, HTML/JS/CSS

- Created an Arduino microcontroller graphics library for LED dot matrix displays, with a detailed write-up available on my website: [MatrixGL Write-Up](#).

SteelSky

[GitHub Repository](#)

Technologies Used: Typescript, NodeJS

- Developed a lightweight static site generator with a minimal codebase, focusing on simplicity and efficiency. This has been powering my personal sites for many years.

GreenWave

[Project Link](#)

Technologies Used: C++, JUCE

- Built a dual-oscillating software synthesizer featuring over 10 original waveforms, MIDI protocol integration, and VST SDK compatibility for seamless use in digital audio workstations.

LifeLab

[GitHub Repository](#)

Technologies Used: C++

- Developed an Analytical Cellular Automata Simulator in C++ which outputs GIFs and CSV analysis of the simulation results.

More Projects

I'm constantly building new things to gain new skills and satisfy my curiosity. I have many more projects on my [GitHub Account](#) as well as at [ReplicatAudio.com](#) and my [Itch.io page](#). I'm always more than happy to discuss any of the projects I've built in the past.