

AARON VOLENEC

Passionate Software Engineer

2024/07/18 resume version

Minneapolis, MN or

St. John's, Antigua

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PROFESSIONAL EXPERIENCE

Foxconn Industrial Internet Mt. Pleasant, WI — *Systems Engineer II*

DECEMBER 2019 - MAY 2024

- **Developed & managed** factory applications for SMT (surface-mount technology) motherboard production lines, integrating numerous systems and increasing factory yield. Proud to have had **300+ happy users** of my apps & tools.
- **Engineered** a box-packing app used by around 50 operators, which integrated with customer networks and ensured 100% verification of product test records based on photographs of all serial numbers in the box.
- **Built** a middleware app & UI which improved automation machine connections and product testing efficiency, processing over 700,000 units and reducing costs.
- **Engineered** product functional testing and visual inspection software upgrades, resulting in increased product yield, plus enhanced test failure reports and remote program update features. Very proud of this work!
- **Rapidly implemented** solutions for urgent customer-facing issues, ensuring agile deployment of critical manufacturing logic fixes. My teammates praised my speed!

Rescue Fellowship Rensselaer, NY — *Full-Stack Software Engineer*

NOVEMBER 2013 - AUGUST 2019

- **Developed** a web app for members to use, featuring friendly-yet-secure passwordless login via emailed-code authentication. Built around a Kafka-like event streaming database and implemented in Node.js.
- **Developed** a *Zoom Meeting Video Archive* which allows past community meetings to be browsed easily. Features access control based on membership payment level. Incorporates 100% metadata transfer from Zoom via APIs. Stores double backups with checksums for hundreds of gigabytes of archived content.
- **Developed** web crawlers to index over a decade of past content across WordPress and YouTube. Created a performant single-scroll incremental-load technique so that over 700 videos can be seamlessly scrolled and played on a single page.
- **Built** a private *Member CRM* storing contact information, payment statistics, encrypted credentials, and content viewing history.
- **Researched** both technical and non-technical topics specific for the organization.

MediaBeacon Inc. Minneapolis, MN — *Software Engineer*

APRIL 2013 - OCTOBER 2013

- **Developed** features for the company's DAM (digital asset management) app, and implemented customer requests.
- **Debugged** a complex technical stack based on GWT and Rhino, fixing issue tickets and adding documentation.
- **Architected** a data model and designed a series of screens for enforcing copyright on assets. The client's feedback was: "*We love it, we love it, we love it.*"

SUMMARY

Creating beautiful & effective applications and network services is my gift & passion in life. Well-implemented software grants people pivotal knowledge & power.

With **over 14 years of experience** doing both backend & frontend programming as well as DevOps, I've developed apps which **have positively impacted hundreds of users.**

I know JavaScript & Node.js like the back of my hand, wherein I can write pages of correct & working code without difficulty.

I rigorously test my software myself, and gather feedback from users directly. My apps are reliable and are not buggy.

A recent & growing interest is to construct integrated AI agents using open-source LLMs running on cloud GPU instances. I am currently developing a library of code for this...

I am seeking a "work from anywhere" remote software engineering position that provides me with the flexibility to be close to my loved ones while continuing my passion for crafting elegant software solutions.

Mphasis Wyde

Eagan, MN — Software Developer

JULY 2010 - MARCH 2012

- **Implemented** business features, UI screens, and data models for the company's insurance policy management app, and customized those for specific customers. Built demos for prospective customers as well.
- **Held** the lead integration (DevOps) role on a client project, overseeing all its code merges and database changes, as well as the compilation & packaging of each versioned build. Was responsible for setting up & administering the project's servers, databases, and app instances.
- **Wrote** clear and detailed documentation of features. Fixed bugs and corrected mathematical errors in financial algorithms. Created formatted report generators.

EDUCATION

Cedarville University

Cedarville, OH

B.S. in Computer Science, minor in Mathematics

AUGUST 2006 - MAY 2010

- For my **senior project**, my team worked with *Burris Logistics* to create a prototype of a freight management system. I developed an Android app for on-truck phones which tracked shipment items and GPS location continually. Also developed a web-based dispatcher app which featured real-time plots of the shipment's course via Google Maps. The system used a Java backend and a MySQL database.
- I was **awarded** "*Outstanding Computer Science Senior in Design*" at graduation for the project's design and architecture.
- **Won** 1st place in the university's team programming contests consecutively in 2009 and 2010. Was also selected by the university to participate in the *ACM International Collegiate Programming Contest*.
- **Worked** as a peer tutor, tutoring students in math all the way from pre-algebra to differential equations and multivariable calculus, as well as in physics, computer science, and other classes. Entered college with an ACT score of 35. Was awarded "*President's Scholarship*" and "*Leadership Scholarship*".
- Overall **GPA** throughout college was 3.5.

ONGOING PERSONAL PROJECTS

Custom JavaScript Compiler and General Toolkit — "Rocknerve"

My growing library for HTTPS/TLS/TCP server and browser applications. Contains VM synchronization, administration, bundling, templating, and backup tools. Allows secure network tunnels to be deployed for various use cases. Features a custom data-type language for keeping programming simple.

Learning to Integrate Custom AI Agents using Open-Source LLMs

I've begun running inference on open-source LLMs at scale via GPU cloud providers including *Paperspace*, *Lambda Cloud*, and *Vast.ai*, and by using a modified version of the *llama.cpp* codebase.

Currently experimenting with API interactivity, RAG methods, function calling, and self-evaluation techniques. I'm aiming to achieve a high degree of control over LLM response characteristics.

SKILLS

Expert level in JavaScript and in Node.js, with 14 years of experience.

Reliable DevOps of servers, VMs, and cloud services including AWS, Google Cloud, DigitalOcean, and more.

Creating & maintaining web apps, desktop apps, APIs, and custom TCP/UDP-based network protocols.

I work in many additional languages including C/C++, Python, SQL, Java, C#, Go, GLSL, Bash, assembly languages, and more.

Accurate & mathematically correct when building analytics, reports, and dashboards.

Strong in Web APIs: DOM manipulation & events, the Canvas API, Web Workers, Web Storage, the File API, Web Audio, Web MIDI, and more.