

Todd Rylaarsdam

Full-Stack and Embedded Systems Engineer

St. Paul, MN 55014

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SKILLS

Software C/C++ (STM32, Atmel, Nordic, Desktop), Low Energy Bluetooth, JavaScript/NodeJS, Swift, Python, Databases (SQL, Firebase, InfluxDB), CI/CD, Google Cloud Platform, Tensorflow

Hardware PCB Design (KiCad, Altium), Digital Logic Design (Verilog), 3D Modeling & Rendering (Solidworks, Onshape), PCB Assembly Coordination, Hardware Debugging (Digital Logic Analyzers, Oscilloscopes)

PROFESSIONAL EXPERIENCE

MICROSOFT

Redmond, WA

Software Engineering Intern

May 2024 – July 2024

As a member of the Excel Coauthoring team, I developed a cross-endpoint solution to substantially decrease forced workbook reloads caused by sheet views. Worked with numerous internal testing frameworks to test existing behaviors as well as validate new changes, and prepared this feature for production. By the end of the 12 weeks the feature was ready to start rolling out to end users.

Skills: C++, Multiple-Endpoint Debugging, Excel

MAYO CLINIC

Rochester, MN

Undergraduate Intern - Neurology

May 2023 – August 2023

Designed, created, and deployed to patient use a system to allow EEG implants to interface with an at-edge Tiny-ML capable microcontroller, enabling 24/7 real-time seizure detection and forecasting for patients with epilepsy, whether they were in the hospital, at home, or off-grid and disconnected from the internet.

Skills: C++, JavaScript, TensorFlow, Python, C#, 3D Modeling, Google Cloud, Grafana, InfluxDB, PCB Design

WINDY CITY LAB

Chicago, IL

Full Stack Embedded Systems Intern

May 2021 – July 2022

Worked on projects from early stage IoT prototypes to production-ready sensors. Responsibilities included communicating with clients like Argonne National Lab, Mayo Clinic and Northwestern University to refine project goals and provide status updates, significant contributions to codebases, design prototyping, and requisition of PCBs and device housings.

Developed a cloud-synchronized, distributed CPU emulator which enabled summer students during the 2020 lockdowns to collaborate remotely, each building their own 8-bit CPU components. Once connected, these individual components formed a complete, distributed, and fully-functional CPU through cloud coordination.

Skills: C/C++, Node.JS, Python, PCB Design, 3D Modeling, Google Cloud, Swift, Kotlin

EDUCATION

GEORGE FOX UNIVERSITY

Newberg, OR

Bachelor of Science in Computer Science, Junior

August 2022-Present

GPA: 3.97, In-Major GPA: 4.00

AWARDS

- Meritorious Achievement Award in Sound Design, Kennedy Center American College Theater Festival, Region 7 – March 2024
- Oregon Site Champion (D2), International Collegiate Programming Contest – February 2024