

Erich Meissner

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EDUCATION

Georgia Institute of Technology

College of Computing, M.S. Computer Science

Atlanta, Georgia

Graduated May 2021

University of Maryland

James A. Clark School of Engineering, B.S. Electrical Engineering

College Park, Maryland

Graduated May 2018

EXPERIENCE

Cleared Work for Federal Government

Full Stack Developer · Spectrum Analysis

Washington, DC

May 2020 - Present

- **Radio Frequency Attenuation:** Developed and owned a private node library that provides a JavaScript API for an electromagnetic propagation analysis tool. This tool is written in C++ and exported to JS using the node-addon-api interface
- **Architecture Rework:** Designed and integrated a highly-available, asynchronous, and micro-serviced architecture that divided a monolithic codebase into a distributed system utilizing both MongoDB and AWS S3 buckets for data storage and retrieval as well as a redis queuing system for inter-application messaging. An aggregate improvement of 380 percent was found in user interface latency.
- **Comprehensive Code Smell:** Performed a memory leak assessment by employing tools like Valgrind to scour over a million lines of C++ and C source code. This effort identified hundreds of potential vulnerabilities like use-after-free and buffer overflow exploits.
- **Production Environment:** Deployed with Docker and Kubernetes orchestration allowing a more reliable, load-balanced platform to run web app. Wrote source code with queuing logic to allow for seamless scaling of RedHat OpenShift 'pods'

Medical Guardian

Software Engineer · Personal Emergency Response Systems (PERs)

Philadelphia, Pennsylvania

May 2018 - May 2020

- **LAMP Web App:** Wrote REST APIs used by the smart-watch to facilitate OTA firmware updates and CRUD functions
- **DB Admin Efforts:** Designed database structure for smart-watch hosted on Microsoft SQL Server and wrote complex queries with the PHP framework Laravel's query builder

Symbiont Health LLC

Co-Founder and CEO · Startup

Kensington, Maryland

Sep 2015 - May 2019

- **Fundraising:** Raised about 100,000 in University and VC grants/awards to develop a fall detection device for the elderly
- **Hardware Engineering:** Created a modular wearable for the wrist, chest, and waist to accurately detect a fall with >90 percent accuracy
- **WiFi Inspired:** Introduced a method of inspecting 5GHz waves of conventional home routers to assess sudden chaotic movements and classify them as human falls. Fundraised another 30,000 (federal NSF SBIR grant) on this idea for further research and establish 'proof of concept'
- **Exit:** Exited through an 'acqui-hiring' at Medical Guardian, who found most value in the fall data collected while testing the wearable devices on dozens of tenants at a memory care facility

HONORS AND CERTIFICATES

Full Banneker/Key Academic Scholarship: The Banneker/Key Full Scholarship is awarded to the top 0.5 percent of UMD applicants each year.

ICAgile Certified Professional: Demonstrated a knowledge of foundational agile topics from a methodology-neutral, mindset-based approach

PROGRAMMING SKILLS

Languages: JavaScript / TypeScript , C++ , Java , Python , C , PHP , HTML/CSS **Databases:** SQL Server , MySQL , MongoDB **Version Control:** Git (GitLab, GitHub, and BitBucket) **Cloud:** AWS , RedHat OpenShift , Azure **DevSecOps:** Docker , Kubernetes , CI/CD Pipelines , Sonarqube