

ERICH MEISSNER

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EDUCATION

Georgia Institute of Technology

Graduated May 2021

College of Computing, M.S. Computer Science

University of Maryland, College Park - Full Academic Scholarship

Graduated May 2018

James A. Clark School of Engineering, B.S. Electrical Engineering, Minor in Finance and Entrepreneurship

Technical Skills: Database - SQL Server, MySQL, MongoDB; **Programming Languages** - TypeScript, Java, C++, JavaScript, PHP, C, Python, R, HTML/CSS; **Test Frameworks** - Selenium; **Source Control** - Git (GitHub, BitBucket, and GitLab); **Cloud** - Azure, AWS, GCP; **Project Tracking** - JIRA; **DevOps** - Docker, Kubernetes, CI/CD

WORK EXPERIENCE

Intelligence Community -- Cleared Work for Federal Government

Washington, DC

Software Engineer

May 2020– Present

- Developed and owned a private node library that provides a JavaScript API for an electromagnetic propagation analysis tool written in C++ using the node-addon-api interface
- 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% was found in user interface latency.
- 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

Medical Guardian -- Personal Emergency Response Systems (PERs)

Philadelphia, PA

Software Engineer

May 2018– May 2020

- Wrote REST APIs used by the smart-watch to facilitate OTA firmware updates and CRUD operations
- Designed database structure for smart-watch hosted on Microsoft SQL Server and wrote complex queries with the PHP framework Laravel's query builder
- Built a user-facing web portal (PHP codebase with JavaScript for client side requirements) for aides of the elderly to perform actions on the watch
- Implemented and owned a portal as an OAuth 2.0 client to authenticate and authorize users.
- Experimented with Docker and Kubernetes to test this product roll-out on a more reliable, load-balanced platform

SpaceX Hyperloop Competition

College Park, MD

UMD - Electric Systems Team

September 2015 – May 2019

- Advanced as one of 22 teams to test prototyped pods on SpaceX's Hawthorne, CA test track (1300 initial proposals)
- Drafted Computer-Aided Design (CAD) sketches for low-power implementation of 350kWh battery for all systems

Symbiont Health LLC

Kensington, MD

Co-Founder and CEO

April 2015 – September 2018

- Raised about \$100,000 in University and VC grants/awards to develop a fall detection device for elderly patients
- Created a modular wearable for the wrist, chest, and waist to accurately detect a fall with >92% accuracy
- 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"
- 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 & Interests

Full Banneker/Key Scholar and Mentor

University of Maryland

UMD Full Scholarship

April 2014 - May 2018

- The Banneker/Key Full Scholarship is awarded to the top 0.5% of UMD applicants each year

National Merit Scholarship

National Merit Scholarship Corporation

Senior Marshal

University of Maryland

- Chosen as the most outstanding leader of the School of Engineering and led the graduation procession *May 2018*