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*