Zachary Heylmun

Principle Engineer

 GitHub   Website   zach@voidstarsolutions.com   402-981-6819

Professional Experience

Principle Engineer @Luminar Technologies
 2018 - Present   Orlando, FL

- Sensor interface design and SDK owner for Luminar Technologies Lidar products
- Firmware architect
- Company owner for software development processes and quality
- Developed patented algorithms for range disambiguation in Lidar systems
- Developed advanced calibration methodologies for Lidar systems
- Developed visualization and engineering tooling to support sensor engineering

Chief Engineer @Synaptic Sparks
 2014 - 2022   Orlando, FL

- Developed app development curriculum for high school students
- Developed CNC assembly and usage curriculum for high school students
- Contributed extensively to the Army's open source GIFT (Generalized Intelligent Framework for Tutoring) program
- Developed enrichment technologies for Nemours Children's Hospitals
- Donated STEM teambuilding experiences to students through Digital Escape Velocity

Chief Scientist @Digital Escape Velocity
 2016 - 2020   Orlando, FL

- Developed state of the art immersive escape rooms
- Utilized IoT technologies to enhance the user experience, eliminating elements which detract from the immersion
- Enabled various levels of difficulty and customization for each escape room
- Developed a modular escape room with VR, touch, and physical interfaces to enable diverse experiences in the same room

Owner, CEO @Voidstar Solutions
 2013 - Present (Inactive)   Orlando, FL

- Successful deliveries in a variety of domains: financial data, virtual real estate, social networking, and IoT hardware
- Developed web applications, embedded systems, backend services, and analytics, alongside mobile and desktop software
- In 6 years of active operation, every single development contract was extended or expanded upon delivery
- Ceased active operations in 2019 after accepting a full time role at Luminar Technologies as Embedded Systems Architect

Software Engineer @Lockheed Martin
 2011 - 2013   Orlando, FL

- Worked with a team of 3 to design and develop one of the first DirectX 11 rendering systems
- Worked extensively with advanced virtual and augmented reality technologies and optics
- Developed Windows drivers for high-speed transfer of images to FPGA based headset display driver

Education

Bachelor of Science in Digital Arts and Science Engineering, Magna Cum Laude @University of Florida
 11/2010   Gainesville, FL

Engineering Expertise

Software Engineering @experience

- Strong background in requirements driven design and development of firmware and software systems
- Experience managing software development efforts, and tailoring development processes to meet project needs
- Developed systems to a variety of quality and safety standards: CMMI, SPICE, ASPICE, ISO26262, MISRA, DO160
- Delivered production software in Rust, C, C++, C#, Dart, Java, Kotlin, Swift, Objective-C
- Strong focus on proper tooling to support developer productivity

Open Source Contributions and Personal Projects @OSS

- Active contributor to Rust OSS, including the embedded ecosystem, drivers, RSA, Rust Analyzer
- Hardware: Open source hardware to improve safety in challenging technical diving environments
- CNC/3D Printing: Designed and built a variety of 3D printers and CNC routers for the escape room and other fabrication projects