

SCOTT E. OTTERBACHER

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Principal-level engineering leader specializing in embedded systems and generative AI. Broad industry experience spanning consumer electronics, medical devices, civil space, and defense. Expert at firmware development, PCB design, hardware-software integration, real-time systems, and using AI to accelerate engineering workflows.

Rhythm

Founding Hardware Engineer

Chicago, IL

January 2026 - Present

Design, manufacturing, and commercialization of medical devices focused on sleep health and treatment of obstructive apnea

Otek Engineering

Owner / Principal Engineer

Tucson, AZ

Aug 2017 – January 2026

Client	Products	Role
Rhythm	Predictive intelligent CPAP machine	Electronics and firmware development
Assemble Labs	AI tools for EEs & embedded SWEs	Subject matter expert consultant Python development of AI-assisted design workflows
WAAY	Automated pocket door systems High-current motion control	Electronics and firmware design Custom motor sourcing and supplier management
University of Arizona Lunar & Planetary Lab	Space-based seismometers & telescopes	Electrical systems engineering consultant Data acquisition, power distribution, radiation tolerance
Delta Development	Battery-powered IoT medical devices	Firmware architect and lead developer C/C++, RTOS, BLE, LTE, GPS, motor control, safety-critical
Specteros	LED horticultural lighting	Rapid proof-of-concept prototyping System and PCB design, LED drivers, thermal management

One Take Audio

AI Software Engineer

Los Angeles, CA (Remote)

July 2024 – September 2025

- Real-time generative AI audio; Low-latency inference pipeline, optimization for edge deployment; PyTorch, ONNX, CUDA
- Embedded Linux (NVIDIA Jetson); AI model hosting, gRPC to host, real-time scheduling, remote deployment/monitoring
- Strategic partnerships with HW industry, technical hiring, architecture decisions, conference demos

Delta Development Team

Manager, Software & Electronics

Tucson, AZ

Sept 2024 – Aug 2025

- Engineering leadership
 - Managed and recruited engineers developing FDA-listed medical devices and cloud infrastructure
 - Established and managed relationships with external consultants, contractors, and suppliers
 - Guided product lifecycles from concept through manufacturing and operations
 - Formalized development processes and created engineering tools
- Technical oversight of safety-critical systems
 - Medical product temperature monitoring, logging, reporting, and alarming
 - Precise control of high-power heating and cooling of medical products
- Strategic initiatives
 - Established in-house development capabilities to reduce contractor dependency
 - Investigated and on-boarded new technologies, including AI tools to enhance workflows

Principal Embedded Systems Engineer

Aug 2023 - Sept 2024

- Lead of embedded software team – Baremetal, FreeRTOS, Zephyr, C/C++, battery-powered, STM32, Nordic, ESP32
- Lead of electronics design team – Altium, PCB design and maintenance, component library creation and curation
- Manufacturing process development – Automated testing, Raspberry Pi, BLE, SW & HW versioning
- IEC 60601 electrical safety, FDA 510(k) documentation, design history files, V&V protocols
- Brought all electronic design in-house, migrating to new company systems

Embedded Systems Engineer (Contractor)

Nov 2018 - Aug 2023

- Firmware architect of multiple products – Temperature control, data logging, fault monitoring, BLE/LTE/GPS connectivity
- Hardware-software integration and debug – Sensor calibration, motor control, power management, EMC compliance
- Production support – Manufacturing tests, automated calibration routines, field troubleshooting

University of Arizona – Lunar & Planetary Laboratory <i>Project Engineer / Electrical Engineer</i>	<i>Tucson, AZ</i> June 2019 - June 2021
<ul style="list-style-type: none"> • Leadership of engineering team developing seismometer for NASA spaceflight applications • Systems engineering, flow of requirements and ConOps into instrument design architecture • Electronics design and embedded software development for extreme-environments 	

Garmin International <i>Sr. Design Engineer / Project Engineer</i>	<i>Tucson, AZ</i> Sept 2017 - May 2019
<ul style="list-style-type: none"> • Leadership of engineering team developing consumer dog products • Architect of electrical designs for battery powered devices with multiple radios; PCB design in CADSTAR • Conception and implementation of manufacturing plans in collaboration with peers in overseas factories 	
<i>Software Engineer</i>	Jan 2017 - Sept 2017
<ul style="list-style-type: none"> • C development on ARM microcontrollers using a proprietary RTOS. Python and C# on Windows PCs. • Multiple-device radio-linked distributed systems 	

Marcus Engineering <i>Sr. Electrical Engineer</i>	<i>Tucson, AZ</i> April 2013 - Dec 2016
<ul style="list-style-type: none"> • PCB design (Altium), firmware (PIC and ARM), and high-level SW (Android, C#, Python, Java, LabVIEW) • Implementation of embedded wireless systems including BLE, GSM, WiFi, and mesh networks • Verification and Validation (V&V) development under FDA and UL review 	

Southwest Research Institute <i>Engineer</i>	<i>San Antonio, TX</i> Jan 2012 - March 2013
<ul style="list-style-type: none"> • Design and testing of digital, analog, and RF electronic circuits in Cadence • Firmware development in C for ARM and MSP430, baremetal and RTOS • Development of wireless systems implementing GSM, WiFi, proprietary RF, and satellite links 	

Northern Embedded Solutions <i>Founding Partner & Engineer</i>	<i>Fairbanks, AK</i> May 2011 - Jan 2012
<ul style="list-style-type: none"> • Development of portable 3D radar for airspace surveillance, and radar signal retransmitter • SBIR Submission (Not Selected) – Space-based ionospheric sounder 	

University of Alaska Fairbanks <i>ECE Department - Research Assistant</i>	<i>Fairbanks, AK</i> June 2008 - May 2011
<ul style="list-style-type: none"> • Radar systems hardware and software development in support of UAV situational awareness 	
<i>Alaska Space Grant Program - Alaska Research CubeSat</i>	
<ul style="list-style-type: none"> • Lead for spacecraft systems and communications subsystem – PCB, firmware, RF link, ground station 	

Michigan Technological University <i>Math Department – Learning Center Coach</i>	<i>Houghton, MI</i> Aug 2005 – May 2008
<ul style="list-style-type: none"> • Tutoring of undergraduate math courses to individuals and small groups 	
<i>ECE Department – FM Passive Radar</i>	
<ul style="list-style-type: none"> • Development of a bistatic passive radar that utilizes commercial FM broadcasts for ionospheric observations 	
<i>Physics Department – AMJOCH Optical Observatory</i>	
<ul style="list-style-type: none"> • Repair and modernization of telescopic observatory robotic automation systems 	

United States Navy – Naval Surface Warfare Center <i>Electrical Engineer Intern</i>	<i>Crane, IN</i> May 2007 - Aug 2007
<ul style="list-style-type: none"> • Reverse engineering, repair, and redesign of radar subsystems consisting of RF and digital components 	

Marathon Petroleum Company <i>Project Management Intern</i>	<i>Findlay, OH</i> Jan 2006 - June 2006
<ul style="list-style-type: none"> • Management of asphalt storage facility projects including electrical, mechanical & civil engineering work 	

M.S. Electrical Engineering	<i>University of Alaska Fairbanks</i>	3.7 / 4.0	May 2011
B.S. Electrical Engineering	<i>Michigan Technological University</i>	3.5 / 4.0	May 2008