

OWEN A DAVIES

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EXECUTIVE SUMMARY

Strategic engineering leader with 15+ years delivering frontier products for medical, robotics, and consumer hardware from concept through global deployment. Scales high-performing, multidisciplinary R&D teams through hands-on, culture-building leadership. Combines expertise in robotic vision systems, AI/ML integration, and regulated hardware design. Trusted partner to executives, investors, KOLs and strategic partners.

KEY HIGHLIGHTS

Domains: Medical Devices · Robotics (Social, Retail, Surgical) · Consumer Electronics

Leadership & Strategy: Cross-Functional Engineering Management · R&D Leadership · Workforce Planning · OKRs & Goal-Setting · Phase-Gate Project Management · Strategic Partnerships · Investor & Board Presentations

Technical Expertise: AI/ML Integration · Robotic Computer Vision · Mechanical & Electrical Design · Global Manufacturing & Supply Chain Strategy · Design for Excellence (DFx)

Quality & Regulatory: Standards Compliance - FDA 510(k), CE, ISO 13485 · IEC 60601 · FDA 21 CFR Part 820 · NRTL Management (CSA, TÜV, ETL, UL) · QMS & PLM Systems (Arena, Duro, Jira)

PROFESSIONAL EXPERIENCE

TRUE DIGITAL SURGERY

Santa Barbara, CA

Director, Hardware Engineering

2023 – Present

- Reporting to the CEO; managing the hardware engineering department (20+ FTEs) including Mechanical, Electrical, Systems, Biomedical, Robotics, Optics, R&D, and AI/ML engineers.
- Led conception, planning, development, and launch of the RE3 4K Robotic Exoscope – an AI-driven 4K 3D robotic surgical visualization platform with 510K, CE, and TUV certification.
- Serve as technical voice in investor and partner roadshows, KOL relations, and clinical

training.

- Manage \$3.7M engineering budget and influence company-wide P&L.
- Hands-on leader, promoting a collaborative and mentorship-driven culture. Instituted monthly engineering all-hands and knowledge sharing sessions.
- Supported and participated in \$10 M Series B1 funding.

Sr Manager, Hardware Engineering

2022 - 2023

- Scaled hardware engineering team from 2 to 12 (10 direct, 2 indirect). Hired and onboarded new systems, robotics, and AI/ML teams.
- Mentored staff and managed resource sharing across 3 major projects.
- Audited and drove redesign of Aeos 2 Robotic Exoscope to meet customer and compliance requirements.
- Mentored staff and managed resource sharing across 3 active projects.

SIMBE ROBOTICS

San Francisco, CA

Director, Hardware Engineering

2021 - 2022

- Reported to the CEO; scaled and ran hardware development and manufacturing for Tally – a fully autonomous inventory-monitoring robot.
- Scaled team from 2 to 10 engineers, including mechanical, electrical, QA, manufacturing, systems, firmware, R&D, and supply chain.
- Led tier-1 CM selection and scaled manufacturing to support more than 300 robot deployments. (1k+ deployed globally as of 2025).
- Managed electrical engineering consultants, CM, and all hardware vendors.
- Led manufacturing transfer for Tally 3.1 robots.
- Managed production and deployment schedules, forecasting, and BOM cost reduction efforts.

Hardware Engineering Manager / Lead Mechanical Engineer

2019 - 2020

- Reported to the CDO, led hardware design of Tally 3.0 robot.
- Managed 6 hardware engineering and admin staff.
- Implemented fleet tracking, PDM, PLM, and project management systems.
- Led mechanical design of Tally 2 RFID and CV robots.
- Implemented manufacturing quality management system and refined in-house production processes.
- Led R&D efforts for CV layout, RFID antenna design, drivetrain improvements, custom compute and camera systems.
- Led CM selection process and local pilot production run of Tally 3.0.

FUNCTION ENGINEERING

San Francisco, CA

Senior Mechanical Engineer

2014 – 2019

- Product design consulting in robotics, consumer electronics, and medical devices.
- Clients ranged from small start-ups to Fortune 500 companies.
- Mechanical engineering experience in design of autonomous mobile robots, robotic arms, social robots, automotive & medical devices, and wearables.
- Technical lead on two autonomous-mobile-robot bases and a 7-DOF robotic arm
- Mentored junior MEs; instituted a new-hire onboarding program.
- 3-mo manufacturing launch support for social robot, Kuri through EVT, DVT, PVT in Zhangmutou, China.

BOSTON UNIVERSITY

Boston, MA

Visiting Researcher / Lead Mechanical Engineer

2014 – 2015

- Founder and lead engineer for the Ventricular Catheter Guidance System (VCGS) – a stereotactic guidance system for External Ventricular Drain (EVD) catheter placement in neuro-critical care.
- Led hardware design of head mount and 3 DOF catheter guide. Invented a novel head frame with fiducial markers to be worn during pre-op CT scan and EVD procedure.
- Developed DICOM-integrated app for trajectory planning.
- *Coulter Grant* awarded for continued development after thesis completion.

AUDIO ENGINEERING

Los Angeles, CA

Various Roles

2008 – 2014

- 6 yrs experience in recording and mix engineering for music and film.
- 1st engineer for hundreds of studio and live music sessions ranging from solo performances to symphony orchestras.
- 2+ yrs at UMG - Interscope Records - Engineered for major label artists and managed studio operations & staff of 20+ engineers/runners.
- Design and build of 3 professional recording studios in Los Angeles.
- Clients & credits include: American Idol, Dr. Dre, Timbaland, Polow da Don, Soulja Boy, Weezer, Will-i-am, Dallas Austin, Canadian Tenors, Watchmen (2009), The Green Lantern (2011), etc.

EDUCATION

MEng, Mechanical Engineering | Boston University

BM, Music Production & Engineering, *Summa Cum Laude* | Berklee College of Music

BS Candidate (2yrs), Mechanical Engineering | University of Wisconsin, Madison