

RICHARD BURD

FULL-STACK SOFTWARE ENGINEER | PRODUCT DESIGN & REQUIREMENTS ENGINEERING | UAV & AVIONICS

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PROFESSIONAL SUMMARY

Full-stack software engineer and product-focused technical generalist with experience spanning web application development, product management, requirements engineering, aviation electronics, and unmanned aircraft systems (UAS). Builds end-to-end software products and interactive web experiences, bridging technical implementation with product design, 3D visualization, and research. Background includes aerospace startups, military operations, and cross-functional humanitarian initiatives.

CORE SKILLS

Software: JavaScript, TypeScript, React, Next.js, RedwoodJS, Node.js, Bun, PostgreSQL, Prisma, REST APIs, Git, GitHub, Docker, AWS S3, Vercel, Render, Cloudflare

Product & Design: Product management, requirements engineering, product design, prototyping, technical documentation, information visualization, UI implementation, stakeholder communication

3D & Aviation: Blender, Three.js, React Three Fiber, 3D modeling, animation, aerodynamics, UAV integration, avionics systems, flight simulation concepts

PROFESSIONAL EXPERIENCE

Technical Consultant | Freelance / Self-Employed | May 2019 - Present

- Design and build full-stack web applications, integrating user-facing React/Next.js interfaces, server-side services, APIs, databases, authentication, and cloud deployment.
- Translate product concepts into functional requirements, prototypes, production features, and interactive data or 3D visualizations.
- Develop and maintain modern deployment workflows using GitHub, Vercel, Render, and cloud infrastructure.

Product Manager | Sagetech Avionics, Inc. | May 2018 - Apr 2019 | White Salmon, WA

- Worked on next-generation avionics product development, including transponder and air data computer initiatives.
- Applied product management and engineering requirements expertise to technology used in crewed and uncrewed aviation.

UAV (Drone) Technician | Agribotix | Mar 2013 - Apr 2018 | Boulder, CO

- Contributed to an early-stage agricultural UAV hardware and software company serving precision-agriculture applications.
- Worked with unmanned aircraft technology and related software for collecting and applying agricultural field data.

Commissioned Officer | U.S. Army | Oct 2008 - Oct 2012 | CO, GA & Afghanistan

- Served in operational and logistics assignments, including Afghan Transportation Network liaison responsibilities during Operation Enduring Freedom.
- Helped establish transportation coordination supporting local employment and mission logistics; recognized with the U.S. Army Commendation Medal (2011).

Project Coordinator | Richard Barron Architects | Aug 1997 - Aug 2004 | Los Angeles, CA

- Coordinated architectural project activities in a professional design practice, supporting communication and organization across project workstreams.

SELECTED TECHNICAL PROJECTS

Web Applications & Production Platforms

- Built and operated modern web application stacks featuring React, TypeScript, PostgreSQL, Prisma, authentication integrations, and API-driven data models.
- Worked with monorepos, CI/deployment issues, and production cloud hosting across Render, Vercel, and Cloudflare.

Personal Website & Interactive 3D Experiences | richardburd.dev

- Created a portfolio highlighting product engineering, design, research, and visual communication; developed interactive browser-based 3D experiences using Blender, Three.js, and React Three Fiber.

UAV Design, Prototyping & Research

- Designed and built fixed-wing UAV and remote-controlled aircraft projects; explored unconventional aircraft configurations, aerodynamic modeling, and technical visualization.

VOLUNTEER & INTERNATIONAL EXPERIENCE

Volunteers for Ukraine | Special Projects Officer | Apr 2022 - Dec 2023

- Produced bilingual training materials for first-aid instruction; interviewed and helped deploy 14 qualified medical professionals to Ukraine; supported website administration.

Kurdistan Regional Government | Volunteer Drone Pilot & Translator | Jan 2016 - Apr 2016

- Deployed a custom-built reconnaissance UAV and provided aerial observation, technical support, and training during operations against ISIS in Iraqi Kurdistan.

EDUCATION, CERTIFICATIONS & RECOGNITION

Flatiron School | Software engineering studies, 2019 - 2020

Defense Contract Management Agency | Contracting Officer Representative certification, 2010

U.S. Army | Company Intelligence Support Team (CoIST) certification, 2009; Army Commendation Medal, 2011

LANGUAGES

English | Hebrew, Arabic, and Aramaic (limited working proficiency)