Brett Heliker

Systems Architect in Orange County, CA.

I am a systems architect with product design experience in companies ranging from Unicorns to Defense. My designs have been in space, military training and combat, and have been manufactured in six-figure production runs. I've lead small, focused teams and larger cross-disciplinary teams. I have architected Big Data plaforms, lead R&D efforts, authored whitepapers and evangelized product to clients and investors.

EXPERIENCE

Internet of Things Architect
Uptake

- Leadership and oversight of team to develop, produce and maintain IoT hardware and sensor integration; delivering real world, client-driven solutions from whiteboard to production.
- Lead R&D and special projects teams to rapidly ingest, transform, engineer, and visualize data, completing both prototype and product-level implementations across many verticals.
- Personally drove effort to create 2 new business units, adding dozens of new clients, opportunities and creating tens of millions in additional revenue.

2015 - Current
Chicago, IL
(remote)

"Chief Belay Officer"
chalkd.app

Using a variety of techniques to exert tension on, support, coach and protect Chalkd as it develops. Responsibilities ranging from sales and design to implementation and architecture, to being the number 1 customer.

2019 - Current

Architect and CTO
Keg-Minder.com

Architecture, design and implementation of everything engineering - from hardware design, development and production to IoT infrastructure to building the website.

2016 - 2018

Director of Technology Insertion; TS clearance
SRI International

Leadership of the Instrumentation and Simulation Research and Technology Insertion team resulting in multiple successful multi-million dollar programs including:

- JTEP geospatial technologies, virtual terrain generation, neogeography
- FlexTrain hardware design, embedded systems design, GPS-denied tracking, data analytics
- XCTC field application engineering, RF system design
- Fracture Surface Topography Analysis simulation and visualization
- BRIGHT Human-machine interaction research

2004 - 2014
Bay Area, CA

Engineering Consultation
Matterport: Hypothesis-driven consulting on prototype hardware design, manufacturability and ruggedization.
Adjacent Applications: Directed software engineering teams for native mobile and web application development, collaborated on technology strategy, and recruited technology talent. Additional help in social media strategy.

EDUCATION

M.S. in Aerospace Engineering, 2004; California Polytechnic State University, San Luis Obispo
Lectured Intro to Aero, Spacecraft Design, Systems Theory and Advanced Spacecraft Dynamics classes while writing thesis on Kalman filtering and control theory.

B.S. in Aerospace Engineering, 2003; California Polytechnic State University, San Luis Obispo
Spacecraft concentration with emphasis on control theory and communications.

PATENTS, PROJECTS, PUBLICATIONS

Patent: Mesh Network Routing Based on Availability of Assets
determining that a given asset of a plurality of assets in a mesh network is likely to be unavailable within a given period of time in the future and in response to the determining, causing a routing configuration for at least one other asset in the mesh network to be updated.

Patent: Local Analytics Device
An improved local analytics device that includes a single-board computer with a high-capacity processing unit, configured to detect abnormal-condition indicators, enabling the asset (as opposed to a remote computing system) to execute a predictive model and corresponding workflow which may enable a user to take preventative and/or remedial action at the asset.

Patent: Provisioning a Local Analytics Device
Methods for provisioning a local analytics device to interact with a remote computing system on behalf of an asset that is coupled to the local analytics device.

Self-Aware Virtual Environment (SAVE)
The design for a next-generation learning system requiring an interactive, adaptive and discoverable virtual environment based on an ontology-driven geographic information system. *(publication pending)*

Human-Collective Training For Tactical Operations
A learning-theory-based program to enable repeatable, scripted and unscripted training situations aimed at improving team/crew operations in a crawl-walk-run development approach. *(publication pending)*