

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 platforms, lead R&D efforts, authored whitepapers and evangelized product to clients and investors.

EXPERIENCE

Uptake

System and IoT Architect, Senior Solutions Architect

2015 - Current

Chicago, IL
(remote)

- 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.

SRI International

Director of Technology Insertion, Senior Research Engineer; TS clearance

2004 - 2014

Bay Area, CA

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

Matterport

Engineering Consultant

2011 - 2014

Palo Alto, CA

Hypothesis-driven consulting on prototype hardware design, manufacturability and ruggedization.

Adjacent Applications

Application Strategist

2011 - 2015

Palo Alto, CA

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*)