

# Brett Heliker

## I am a Systems Architect in Irvine, CA.

I'm looking for challenge, opportunity, and to make the world a better place. Here's a little more about me, and when you're done reading please email me at [bheliker@gmail.com](mailto:bheliker@gmail.com).

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### EXPERIENCE

#### Uptake

##### Staff System Architect, Senior IoT Architect, Senior Solutions Architect

2015 - Current  
Chicago, IL  
(remote)

- Joined as an early engineer and helped growth to a \$2 billion valuation and 800+ people.
- Directed hardware design and production, sensor integration and networking; bringing a software-centric and hardware-shy startup from zero to 200,000 devices produced per year.
- Lead R&D and special projects teams, rapidly prototyped and completed proof-of-concept implementations from whiteboard to working device across many verticals.

#### SRI International

##### Director of Technology Insertion, Senior Research Engineer; TS clearance

2004 - 2014  
Bay Area, CA

Lead the Instrumentation and Simulation group's Research and Technology Insertion team through several years and several 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

Consulting in hardware design, manufacturability, ruggedization.

#### Adjacent Applications

##### Application Strategist

2011 - 2015  
Palo Alto, CA

Consulting work to apply and direct software engineering effort for Mobile native apps and web apps, create technology strategy, and find and acquire talent. Additional help in social media strategy.

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### 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.

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### 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.

##### 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*)

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### SKILLS

Systems Design, integration engineering, embedded systems, hardware design, algorithmic analysis, data visualization, geospatial technologies, virtual terrain generation, neogeography, military & first response training, LIDAR processing, GPS-denied tracking, web collaboration, extensive field work and testing, project management, proposal writing, lab management, thermodynamics, control theory, aerodynamics, fracture mechanics, geospatial sciences, land survey, programming, technical writing