

> summary

Engineering Director & Principal Engineer who loves to solve complex problems in a collaborative environment. I excel in technical leadership roles where I act as a facilitator between stakeholders and multiple engineering teams while actively contributing to a product team. During my nearly two decades of experience I have been hands-on with all parts of the product lifecycle in many different professional environments. Most of my work has involved system integration and networks, which gives me an end-to-end view as well as insight beyond that of most software engineers into the special needs of DevOps. With my background in applied research science, I am particularly skilled at creating emulations, prototypes, and proof-of-concepts for technology decision trades.

> highlights**Program & Product Management**

- Executive Decision Support
- Technology Trade Studies
- Budget & Scope Oversight
- Agile Management
- White Paper + Course Development

Software Engineering

- Integration (REST, WebSockets, RPC)
- Server development (Python, Java, SQL)
- Micro-services & message-oriented-middleware
- Sysadmin (Linux, OS X, AWS, Heroku)

Systems Engineering

- Requirement and Interface Analysis
- Systems Architecture & DoDAF
- Risk Analysis, Mitigation, and Burn-down
- Information Security Analysis

Network Engineering

- Large scale network test beds
- Mobile IPv4, IPv6, and multicast architectures
- MANET & SATCOM performance
- Traffic Engineering + Quality of Service

> employment experience**Engineering Director @ Trammell Ventures (Austin, TX) December 2015 – Present**

As a direct report to the CEO, I am responsible for the technical success of engineering projects for client engagements and incubation projects. I provide technical oversight to contractors and manage a small team.

- Oversight, systems engineering, and software architecture for a crypto-currency altcoin.
- Full stack development for an information security product sales and brokering web app (Python 3 / Flask).
- Oversight, systems engineering, and quality assurance for web-based automated Bitcoin trading platform.
- Oversight and test of a scavenger hunt and puzzle mobile app.
- Creation of puzzles and Capture the Flag hacker games for InfoSec Southwest and Bodyhacking Con.
- Oversight and maintenance of several websites and blogs.

Engineering Consultant @ Trammell Ventures (Austin, TX) November 2014 – December 2015

- Full stack development of a proof-of-concept of a Twitter privacy app (Python 2 / Django).
- Development and maintenance of an e-commerce platform for digital infosec products (Ruby on Rails).

Engineering Consultant @ Datapipe (Austin, TX) July 2012 – December 2013

- Developed and maintained custom OS X login screen that authenticates against a RADIUS server.

Platform Director @ Monstrous (Austin, TX) February 2011 – April 2013

As a direct report to the CEO I was responsible for technical success of the company music rhythm game products and also managed a small team of engineers and designers.

- Product Manager for a web game backend and related properties. Supported investor briefings.
- Designed and documented system architecture, led release engineering, led quality assurance.
- Developed prototypes of realtime audio analysis for a rhythm game (Python 2/EchoNest)

Project Leader @ The Aerospace Corporation (El Segundo, CA) September 2003 – November 2011

Technical counterpart for MILSATCOM DoD officers to provide independent oversight of defense contractors.

- Primary PoC between TMOS DoD Program Manager (\$2B network architecture + ground system program) and Lockheed leadership for network architecture, design, risk reduction, and test efforts, including oversight of a 60-person network architecture risk reduction effort between contractors and military research test beds.

- Led independent review of system risk reduction for \$20B TSAT program, resulting in major improvements to requirements, architecture, and risk mitigation plans. Coordinated implementation across systems engineering working groups. Received “FFRDC Employee of the Year” award for the impact from this effort.
- Led 30-member working group to define network architecture, requirements, and interfaces for TSAT network architecture components related to MANET, addressing, and availability. Lead author and editor of several related white papers. Represented TSAT to working groups across several other DoD network programs and taught space networking courses at GSAW and AIAA Space conferences.
- Principal Investigator for a corporate research initiative on problems in space networking. Set priorities for research, oversaw researcher progress, gave incremental outcome briefs to senior management.

Senior Software Engineer @ Agari Mediaware (Santa Monica, CA) April 2002 – June 2003

Agari was a software startup that provided message-oriented-middleware framework to help broadcast media companies (including HBO and Showtime) integrate their digital content workflow.

- Designed and developed integration components for our message bus framework (Java/JMS).
- Developed performance test bed to improve product capability across different message bus providers.
- Sales engineering support at NAB and as a technical point of contact for prospective partners.

Engineering Consultant @ Bright Brains (Houston, TX) April 2002 – December 2003

- Part-time maintenance and technical support for the AdvanceOnline Learning Management System.

Software Architect @ Vidyah (Los Angeles, CA) May 2001 – April 2002

Vidyah was a web-based video presentation startup that provided engineering services to Knowledge Universe.

- Product manager and maintenance for the AdvanceOnline Learning Management System.
- Implemented chat client and various backend administration tools for the Vidyah video publishing tool.
- Sales engineering for prospective clients, including requirement analysis to generate cost estimates.

Engineering Consultant @ Hot Topic (City of Industry, CA) January 2001 – May 2001

- Architecture and design to integrate Hot Topic’s website with their corporate backend fulfillment system.

System Architect @ iXL (Los Angeles, CA) February 2000 – January 2001

- Technical lead for professional service engagements to build e-commerce websites for several Fortune 500 clients including Hot Topic, Frito Lay, and Hallmark. Sales and business development support.

Member of the Technical Staff @ The Aerospace Corporation (El Segundo, CA) June 1997 – February 2000

Provided engineering oversight to DoD and IC programs through proof-of-concept, test, and review.

- Technical lead to create a proof-of-concept showing how autonomous mobile agents could act on behalf of a data fusion system. Lead developer and led a team of summer interns.
- Analysis of high-speed network deployments at international Government sites, provided on-site technical oversight of contractor activities and performance tuning at those facilities.
- Developed and taught classes on TCP and ATM to government and corporate seniors.
- Developed satellite link delay/jitter/loss emulator to investigate Solaris TCP performance issues over SATCOM. Worked with Sun and DoD to improve capacity utilization. Lockheed Martin purchased this tool.
- Assisted in architecture and deployment of Aerospace corporate network improvements. Gave courses to company IT team with regard to the use and configuration of their new infrastructure.
- Developed the server for a distributed weather visualization tool.

> education

Bachelor of Science in Computer Science, Harvey Mudd College (Claremont, CA) Class of '97

- Dean’s List during last 3 semesters. Studies focused on networks, operating systems, data compression.
- Senior clinic project to distribute a scientific weather visualization tool across an ATM WAN.
- Summer Research Fellowship to implement a segment of the CalREN ATM WAN high speed test bed.
- Concentration in English Literature.

> extra-curricular

Participant at DEF CON, past participant at IETF, IRTF, and NANOG.

Taiji + Qigong for 3 months at Wudang Traditional Martial Arts School (Wudangshan, China) Winter 2012

Certified Dharma Yoga Instructor, 300 hour level, Dharma Yoga (Austin, TX) Summer 2011