

# MITCHELL PERILSTEIN

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## SOFTWARE ARCHITECT AND ENGINEERING LEADER

**Build Consensus | Drive Culture | Deliver Clarity, Quality, and Value**

Experienced in software leadership, architecture, and development, operating systems, distributed systems, microservices, and embedded hardware. Strong project management, product management, distributed team management, and business ownership. Enthusiastic free / open source software advocate, author, and contributor. Distributed web technologies that enable privacy, free speech, democracy, and humanity. Develop strong client relationships using excellent interpersonal communication skills.

## PROFESSIONAL EXPERIENCE

**Key2Act**, New Berlin, WI (remote)

### Software architect

**2018 - present**

- Managed a team in the building automation IoT vertical. The key mission was migrating a legacy system from hybrid desktop to a fully scalable, cloud based solution. Coached, mentored, and provided technical direction. Implementation was in .NET Core, Python, and Node.js with Serverless deployment.
- Reverse engineered embedded software from lost code up to creating new releases, solving field problems. Solved problems involving a number of automation protocols.
- Developed a number of AWS based components and workflows using docker containers and lambdas, deployed with Terraform and Bitbucket pipelines. Applied AWS's new Greengrass IoT technology to provide a secure, managed, fully connected device fleet. Utilized RDS, ElastiCache, Cognito, SSM, IAM, S3, CloudFront, Dynamo, ECR, EBS, EC2, AWS IoT, VPN, API Gateway, embedded Linux, etc.

**PTC**, Exton, PA

### Software Engineer, Senior Technical Consultant

**2015 - 2018**

Advanced development and architecture team for Thingworx IoT platform.

- Investigated new product directions through POCs, consensus building, high level designs, and other experiments, supporting larger product development efforts.
- Led migration of Java monolith to highly scalable, available, distributed, system, including repackaging products and dependencies as microservices with docker containers on DC / OS platform (Mesos / Marathon over AWS ASG).
- Added additional facilities for monitoring, deployment, service discovery, metrics, queuing (Kafka), and persistence (Cassandra / Postgres / InfluxDB), implementing Golang, Java, and Python on containerized Linux, migrating product stack.
- Contributed features, fixes, security concerns, code reviews, and improvements to core business platform and CI / CD workflow and testing, keeping product current, customers serviced, and revenue sources on track.
- Participated in migration of Java monolith to highly scalable, available, distributed, system, repackaging products and dependencies as microservices with docker containers on DC / OS platform (Mesos / Marathon over AWS ASG via Terraform).
- Authored command channel REST protocol for uniform microservice management, enabling out-of-band query and control service in consistent manner.
- Participated in open-source professional, upstream contributions, including Dropwizard Metrics reporter for InfluxDB, modified Mesos-Consul bridge, managing Kafka and Cassandra services and creating custom DC / OS kafka service with client options.
- Created ELK stack usability dashboards in Kibana with custom Elasticsearch queries, enhancing observability of system and accelerating developed productivity.
- Created numerous Grafana dashboards drawing from InfluxDB and other sources, establishing performance baselines and evaluating results of implementation experiments.

- Evaluated Hazelcast storage bandwidth for distributed performance, allowing informed directional choices.

**TruePosition**, Berwyn, PA

**Team Lead**, Continuing Software Engineering

**2010 - 2014**

- Performed software archaeology of minimally documented UTDOA RF based location service product, obtained from corporate acquisition, with minimal input from principals.
- Received 2TB of assorted C++, Java, Python, etc. code, email, business and engineering data, resurrecting servers and embedded devices, and performed locations.
- Modified leading to internet deployed server, 2 new embedded platforms, and working prototype system performing locations, informing market plan.
- Ported E-911 product from Solid and TimesTen databases to Postgres with Bucardo replication, realizing substantial license savings and increasing product availability and robustness.
- Managed in-house and offshore (India) software developers, focusing on continuing software lifecycle, improving software quality without derailing features.

**TruePosition**, Berwyn, PA

**Manager**, Sustaining Software Engineering

**2008 - 2010**

- Managed 6 software engineers and 4 network engineers, maintaining fielded software releases.
- Interfaced with customers, PLM, sales, R&D, doc, and deployment groups, isolating R&D from interrupts, accelerating feature and schedule commitments.
- Performed administrative tasks, including timesheet approvals and purchase requisitions in SAP, budget planning in Cognos, extensive workflow and issue management in ClearQuest.

**TruePosition**, Berwyn, PA

**Principal Engineer**, Sustaining Software Engineering

**2008 - 2008**

- Produced service packs, patches, internal procedures and customer bulletins, providing timely support and customer goodwill.

**TruePosition**, Berwyn, PA

**Senior Engineer**, Sustaining Software Engineering

**2006 - 2008**

- Led Tier-4 internal escalation point, working live with customers during issues, performing forensics and debugging, communicating effectively with customer and internal groups, and satisfying SLA's and product improvements.

**ACE TECHNOLOGY GROUP**, Location Frazer, PA

**Partner**

**2004 - 2006**

- Served as technical partner in start-up, providing outsourced IT departments to small businesses, receiving big-company helpdesk experience in small operation.
- Produced custom Linux distribution and helpdesk software, allowing small number of people to maintain large number of customer desktops, servers, and ISP services.

**HITACHI DATA SYSTEMS**, Fremont, CA

**Software Engineer**

**2000 - 2002**

- Designed customer API for proprietary Internet protocol, implementing server deployment and monitoring high availability SAN clusters.
- Ported SGI CXFS filesystem to Solaris, making new, high performance and robust storage option.

## **ADDITIONAL RELEVANT EXPERIENCE**

**ABSTRACT HARDWARE, LTD**, Uxbridge, UK

**Senior Software Engineer**

**COMPASS DESIGN AUTOMATION** (formerly CAD Language Systems Inc.), Columbia, MD

**Senior Software Engineer**

**AIWare**, Cleveland OH  
**Software Engineer**

## **EDUCATION**

- **Bachelor of Science (BS)**, Computer Engineering, Case Western Reserve University, Cleveland, OH
- Certified Outsource / Offshore Project Manager, International Institute for Outsource Management continuing education
- Continuing Education, Six Sigma Green Belt and Lean Six Sigma, Villanova University, Villanova, PA

## **VOLUNTEERING**

- Board of Directors, Habitat for Humanity, Rapid City regional chapter BOD, volunteer coordinator and construction at Coatesville PA chapter
- Director, Hill City Ambulance, volunteer firefighter, EMT-I, and director of rural ambulance service. Red Cross CPR / first aid instructor
- Board Member, Animal Welfare Society, Cumberland MD