

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

Wallaroo Labs, New York, NY (remote)

Software Engineer

2020 - present

- Developed platforms for low latency, high performance, distributed stream processing and machine learning. Used Pony, Rust, C++, Kubernetes, Python, scikit-learn, ONNX, PyTorch, XGBoost, Azure.

Acorns, Irvine, CA (remote)

Software Engineer

2019 - 2020

- Prototyped a core infrastructure component to handle financial transactions asynchronously, and robustly, at scale, with accountability and substantial business guarantees. GraphQL, Kotlin, DynamoDB, QLDB, Lambda, Docker/ECS, SNS, SQS, Kafka, and Serverless.

Key2Act, New Berlin, WI (remote)

Software Architect and Manager

2018 - 2019

- 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 including MQTT, oBIX, and BACnet.
- 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, SM, S3, Cloudfront, Dynamo, ECR, EBS, EC2, AgensGraph, 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