

Jeremy T Peterson

Software Architect, ML Researcher, Security and Network Engineer with 20+ years in the Medical, Finance and Manufacturing industries

Portland, OR
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EXPERIENCE

ZHealth Documentation — *Principal Architect*

2017 - 2024

On a company-wide basis, researched and developed large Initiatives.

Analyzed gaps and designed significant changes for:

- Platform software stack (POC's, dotnet, MSSQL, Azure)
- Customer integration strategy (data interfacing with hospitals)
- Security (software, network, infrastructure)
- Business (testing, training, processes)

Based on that research, created and fostered multi-year initiatives that had continued research, design, implementation of a wide variety of projects, including but not limited to:

- Migration of application from on-prem server to a cloud model
- Migrations of code to latest standards, including dotnet core 8.0
- Infrastructure as code (terraform, 4 separate environments)
- Azure build and release pipelines
- Zero-trust security models
- SaaS SSO options including OpenID Connect and Smart On FHiR
- ML integration into existing product
- SoC2 and HIPAA certification implementation

Worked with product owners, customers, and developers to design software features and architecture.

Maintained and updated cloud apps, databases, networks, and security.

A3o Studios — *Software, Network, and Security Consultant*

2016 - 2017 (Full-time) - 2010 - 2015 (Part-time)

Designed, developed and hosted a variety of industry specific web applications focused on increased KPI's, including:

- Finance tools for non-profit grants on an organization level – provided past and projected financial forecasts based on internal data and FTE scheduling
- B2B self-service portal for manufacturing industry specific warranty and parts delivery

Penetration testing, security hardening for network infrastructure.

Employee training for Portland based financial and tax companies.

PRIMARY CAREER SKILLS

dotnet core, c#, c++,
PowerShell, Aspire, MVC, Git,
SQL, JavaScript, Python,
HTML/CSS.

Azure, AWS, Windows, Linux,
Active Directory, DNS,
Firewalls, Advanced
networking and routing,
Hardware troubleshooting,
Data replication.

Cybersecurity, Penetration
testing, Red/Blue teams,
Forensic Analysis, Disaster
Recovery and DR Exercises.

CI/CD, DevOps, Docker and
containers, Azure DevOps and
pipelines, Github actions,
Terraform, Encryption,
Certificates and Secret
Management.

AI / Machine learning, LLMs,
Agents, Model hosting and
training, Image processing
and generation, Data
processing.

Solution Architecture,
Solution Documentation.

Product Design, Project
Management, Product owner,
Jira, Agile in many forms.

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The Retirement Plan Company — *Software Engineer* 2015 - 2016

Developed and maintained SaaS web applications integral to directing the work of 100+ employees in day-to-day operations, and provided critical investment information to retirement plan sponsors.

Secured and refactored legacy web applications by implementing current best practices, focused highly on reducing technical debt, improving code quality, security, and performance.

Heintzberger | Payne Advisors — *Senior Technical Lead* 2004 - 2014

Senior Technical Lead, Architect, Department Manager — 2009 - 2014

- Designed, managed and participated in development of industry specific applications and services targeting B2B/SaaS users, public facing websites
- as the company grew from \$100M to \$2B of assets under management.
- Managed, directed and supervised a team that provided all development, support and technical services company wide.
- Ensured accurate and timely distribution of millions of dollars to retirement plan participants by developing an application for tracking all cash holdings across participants and accounts
- Ensured delivery of sensitive reports, files and messages to clients by developing a custom client portal

Software Engineer — 2006 - 2008

- Developed web application for publishing investment transactions and performance for high net worth individuals, as well as a set of tools to automatically export that data from existing systems
- Implemented and heavily customized CMS sites for public-facing external use
- Developed numerous graphical/charting reports for performance data analysis and client delivery

Network Administration, Application Support — 2004- 2005

- Managed the merger of all technical systems of two companies into a new single corporate entity
- Built, maintained and managed the technical infrastructure required for all business operations including, local, virtual and collocated servers, network infrastructure and employee devices

RELEVANT PROJECTS

Researched and developed an open source peer-to-peer blob storage platform with a heavy focus on encryption, x509 certificate identities, and used distributed hash tables. Intended for use in distributed applications.

Custom web app for ranked-choice voting at live Portland film events, with ballot printing, real-time displays for tallies and current winner selection.

VOLUNTEERING

Volunteered with multiple nonprofits and small local businesses for a variety of roles, est. 200 hours a year.

INTERESTS

Film, photography, design.

Led small teams in multiple high-pressure, short duration film competitions.

CTF's

Submitted to the Blackhat music competition, we created an MP3 with an embedded ZIP in the ID3 tags, with multiple specialized challenges.

2022 - Won a Pwnie!

2023 - 2nd CTF

<https://projectmammoth.com>