JOSH ENDRIES

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Senior Software Engineer

Pragmatic Architecture | Business-Aligned Execution | Practical Evolution & Innovation

Scope, design, plan, and implement full-stack systems from hardware to UX, concept to production. Build and maintain reliable, sustainable, performant and cost-effective apps, services and libraries. Continuously expand knowledge and apply new technologies, including AI, with sound judgment. Evolve business processes to improve efficiency, transparency and predictability. Balance business and technical objectives through right-sized planning and execution. Foster innovation and accountability through mentorship and collaboration. Communicate technical information clearly across all organization levels (written, verbal, diagrams).

SKILLS SUMMARY

- **Languages**: C#, TypeScript/JavaScript, Python, HTML/CSS, SQL, Bash/PowerShell, PHP, Java
- **Methodologies**: Agile, SAFe, Kanban & custom workflow processes
- **Technologies**: AWS (Aurora, DocumentDB, EC2, Lambda, S3, SimpleDB), Azure (ACA, ACI, App Service, Batch, Cloud Service, DevOps, Event Hub/Grid, Function Apps,Logic Apps, Service Bus), Docker, Git, PostgreSQL, MySQL, SQL Server, Angular, React, Redis, SignalR
- **AI tools**: GitHub Copilot, Claude Code, OpenAI Codex; agent, API, chat, spec-driven usage
- **Architectures**: Serverless, event-driven, batch, queue, service-oriented (SOA), microservices

PROFESSIONAL EXPERIENCE

COVETRUS, INC., Portland, ME (remote) 2019 - 2025

Senior Software Engineer; Tech Lead (Remote)

Designed, implemented and supported infrastructure, libraries, services and apps, primarily using C#.NET, TypeScript and Azure technologies. Provided technical leadership, code reviews and mentoring to team of 1-2 quality assurance engineers, 2-4 software engineers, overseeing many dozens of repos, 100+ services (100M+ requests daily), dozens of shared libraries and several web apps. Provided support to other teams and leads, management and product to estimate and prioritize work, evolve process, fix problems and design solutions.

- Guided team in creating set of guidelines and best practices, enabling more reliable, maintainable, documented results, reducing project onboarding time from days to hours or minutes.
- Supported team improvement by creating collaborative modeling process and introducing reusable YAML pipelines in Git, improving accurate estimation from under 50% to over 90%, and velocity and cycle time improvements of ~50%.
- Created Microsoft Azure Function App integrated with Azure DevOps and Teams to track / report on cycle time, enabling team to show and be accountable to estimates, identifying improvements.
- Identified and implemented cost savings changes in architecture, process, right-scaling, auto-scaling and removing unused resources, ultimately cutting about 25-30% of annual budget.
- Updated several services from .NET Framework on Windows to modern .NET on Linux; migrated Microsoft Azure Cloud Services apps to App Services, Function Apps, Batch, Container Instances or other technologies as appropriate; broke up monolith systems when possible and applicable, improving maintenance, management, security, scalability and cost-effectiveness.
- Prototyped converting legacy .NET ETL process from Microsoft Azure Cloud Services, Batch, Blob and SQL Server storage over to Python and Databricks, delivering working end-to-end proof-of-concept.
- Migrated cloud ETL process from Azure Function Apps to Batch, improving reliability and security, reducing cost by ~50%.

- Evaluated and implemented AI (GitHub Copilot) for workflow improvement when effective / impactful: performed A-B comparisons between using AI and not, measured negligible impact on overall time; realizing significant gains for creating unit tests and summarizing small to medium codebases.
- Converted services to Docker containers, improving operational reliability, scalability and portability.

T. S. PINK CORP., Oneonta, NY (remote) 2008 - 2024

Software Engineer, System Administrator (Remote)

Freelance client. Managed infrastructure, provided custom app and web development, and support for e-commerce web site.

- Managed physical FreeBSD Unix servers running Apache web and PostgreSQL database services, including hardware, software, planning and purchasing (Perl, PHP, HTML, CSS, JavaScript, VeriSign / PayPal PayFlow Pro).
- Later migrated physical machines to AWS (EC2) virtual machines, then migrated again to Shopify, reducing costs by 80% overall.

VET'S FIRST CHOICE. (formerly VETERINARY DATA SERVICES, INC.), Lexington, KY 2014 - 2019

Software Engineer III 2016 - 2019

Developer 2014 - 2016

Worked independently, as a team and with management and product teams to discover requirements, design, implement, maintain, and support services, including public APIs.

- Created and supported flexible, event- and request-driven services, some handling millions of requests daily, using C#/.NET and various SaaS / PaaS / IaaS technologies such as Microsoft Azure App Services, Function Apps, VMs and containers, storing data in Redis, SQL, blobs, memory and files as appropriate.
- Improved log collection system without changing requirements by rearchitecting and simplifying system, saving support team hundreds of hours and over $1K in hosting costs every month.
- Worked with team to build and maintain custom, infinitely-scalable, infinitely-historical blob-based database system, supporting services and APIs (like Databricks or Parquet, but before Parquet existed, and with indexing capabilities), enabling users to efficiently query and retrieve data from changes at individual field level through entire multi-terabyte datasets.
- Helped manage, maintain and develop dynamically scalable, high-performance ETL solution that processes terabytes of data nightly (Azure Cloud Services, App Services, blob storage) with bi-directional batch and real-time functionality (Azure Relay) to power customer apps. Later expanded to handle cloud-based data sources with new more cost-effective architecture (Azure Function Apps, Azure Batch).
- Worked with product and development teams to design, plan, implement and maintain complex multi-tenant supply chain management system with multi-domain, multi-vendor, multi-client integrative SKU classification using SQL Server (temporal), .NET, JavaScript, TypeScript and React; still used by clients today.
- Initiated policy to set aside time for cross-team knowledge sharing (cross-training), subsequently expanded to general learning and experimentation (tinker time), and later expanded again across groups (innovation days), increasing solution supportability and knowledge for team members and fostering innovation across the organization.
- Introduced concepts company wide, like serverless computing (Azure Function Apps), eventing (Azure Service Bus, Event Hub and Grid), containers (Azure Container Apps and Instances), and AI practices (different methods, experiment results, pros / cons), modernizing and improving overall security, cost-efficiency and performance through reserved time for innovating.

SUPPLEMENT CENTRAL, Pittsburgh, PA (remote) 2007 - 2018

Software Engineer, System Administrator (Remote)

Long-term freelance client. Provided custom app and web development, and support for e-commerce web site (PHP, HTML, CSS and jQuery), fully custom back-end Dynamics / Great Plains integration, shipping vendor integration, and Java app and services development.

- Handled purchasing, installation, configuration and management of VMware hosts and guests, networking switches, load balancers and VMs (Apache and PostgreSQL on FreeBSD Unix). Managed everything, including backups, redundancy, failover / high-availability, performance, and security.
- Migrated from co-location to fully virtual AWS (EC2 and Aurora) and OpenCart platform, cutting costs by ~50%.

CORNELL UNIVERSITY, Ithaca, NY (remote) 2009 - 2014

System Administrator III 2012 - 2014

Managed infrastructure and developed software as part of College of Engineering IT Service Group (ITSG).

- Managed VMware, Hyper-V and Eucalyptus cloud systems and hundreds of physical Linux / Windows servers in multiple data centers with Puppet configuration management and automatic server provisioning (via AD, DHCP and PXE). Planned, purchased, installed and supported hardware and software for staff, faculty and research groups.
- Created scheduling system, unifying multiple Rocks clusters into one, with cluster-owner priority.
- Helped migrate several faculty / research departments disparate enterprise systems (Linux / Windows) to central AD environment, working with IT to unify access for both Windows and Linux clients (LDAP / RADIUS AAA, home folders, security group management).

Programmer/Analyst III 2009 - 2012

Performed system administration and software development for NSF's National STEM Digital Learning (NSDL) public data repository API and related systems (blogs, wiki, search), educational resource used nationally.

- Maintained dozens of Linux servers (hardware and software).
- Developed and maintained custom database software and APIs (Java) used by hundreds of clients/institutions globally, providing research and educational resources used by thousands of end users.

PYRAMID BUSINESS SYSTEMS, Binghamton, NY 2003 - 2008

Network Operations Center Manager

Solely responsible for data center planning and operations, including purchasing, power distribution, hardware, networking, Internet services, internal and external client support, being on-call with SLAs, and application and web development both internally and for clients.

- Configured active-active network redundancy with stateful NAT, managed backups, security, physical and virtual servers (VMware ESXi) running web, database, email, file, DNS and other services both for ISP-related and customer services (FreeBSD, Linux, Windows, IMAP, Postfix, Cisco).
- Developed several internal tools and customer web sites (MySQL, PostgreSQL, Java, PHP, Apache).
- Developed and deployed an embedded captive-portal VPN-based system with credit card payments to supply public WiFi Internet access (and later, private school campus). The device used FreeBSD, ChilliSpot, MySQL, Ruby, Apache & shell scripts all running from SD storage on a mini Soekris PC.

EDUCATION

Master of Professional Studies (MPS), Information Science, Cornell University, Ithaca, NY

- Software Engineering focus; projects: Cal.m, MapHub, *book, Bus Tracking

Bachelor of Science (BS), Computer Science, Daniel Webster College, Nashua, NH

- Software Engineering focus; projects: Risk, Cornelius Effect, Internet browser/email suite

PERSONAL EXPERIENCE

- Amortizely (www.amortizely.com) - Web app to visualize financial input/output scenarios