David Watson

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Summary

A flexible software generalist coding back-ends, middle-tiers, and front-ends into complete, full-stack, shipping software, all of my roles were developer and mentor. Costs have scaled down from desktop to cloud and mobile to near zero if it weren't for the load-profit of crowd-cloud. **I've tamed complex ideas into solid tech** by making sense of prototypes in user's hands worldwide until product development ends. Leadership is being a good peer regardless of role, where the peer is human, computer, team, or cluster. **Software *is* infinite extensibility.**

Experience

Freelance ⊕ — 2020-2024
C++, Python 3, NodeJS, Typescript, Docker/Kubernetes — Pittsburgh, PA

- Carnegie Mellon University Senior Member of Technical Staff, ETC
- Caterpillar Tech Consultant (1099) C++/GCC/Linux ZCU-104 PYNQ Terrain Vis.
- Wyvern Tech Consultant (1099) NodeJS, TypeScript, Docker(compose), k8s

Caterpillar ⊕ — 2018-2020
Software Engineering Specialist — Pittsburgh, PA

- Assembled Sensor Storage for Edge Network on Kubernetes using Python 3, Minio, and PostgreSQL with a team of 4 engineers
- Collaborated with senior IT staff of 12 over planning and long-term implications of hyperconverged infrastructure on cloud native for storage

Rent Jungle (RainMaker (RealPage)) ⊕ — 2016-2018
Senior Software Engineer — Pittsburgh, PA

- Led weekly retro to 2x better cadence, communication, velocity, and teamwork
- Crafted Scrapy (python 3) crawler on Django, PostgreSQL, k8s (Tor)

Wellbridge Health ⊕ — 2015-2016
VP Product Development — Pittsburgh, PA

- Led 4-person interdisciplinary design team through HIPAA-compliant EmberJS SPA MVP designed and delivered in collaboration with MAYA Design
- Developed REST API backend using Python 3/Django, DRF and PostgreSQL serving EmberJS SPA on Aptible with 4-person team

Hire an Esquire (Major, Lindsey, and Africa) ⊕ — 2014
VP Engineering — Pittsburgh, PA

- Led a team of 6 through a lean Python 3 redesign and refactoring of the entire UI/UX from legacy MVP Franken-Django system for attorneys and agents
- Reduced daily production firefighting by more than 50% using nimble methods, automated tests, CI/CD, code review, and design review

Education

Duquesne University ⊕ — BS/BA
Business, Computer Science, Music

Worldview

Linux
● ● ● ● ○
arch, debian, redhat, fedora, ubuntu

MacOS
● ● ● ● ○
BSD

Windows
● ● ● ○ ○
WSL 2

Containers
Docker, Podman, LXC/LXD
● ● ● ● ○

Virtualization
Proxmox, KVM
● ● ● ○ ○

Private Cloud
Kubernetes, k3s, minikube
● ● ● ● ○
k8s, helm

Public Cloud
AWS, GCP, Azure
● ● ○ ○ ○
aws, gcp, azure

Databases
MySQL, PostgreSQL, SQLite
● ● ● ○ ○

Frameworks (Scaffolding)
Django, Flask
● ● ● ○ ○
RoR

Programming Languages

C++
Microsoft VS Code and GCC
● ● ● ○ ○

Markup
HTML, CSS, MarkDown (MD)
● ● ● ○ ○

Python (2.x and 3.x)
OO, functional, OOA, OOD
● ● ● ● ○

Ruby
● ● ● ○ ○

Shell
bash, fish, zsh
● ● ○ ○ ○

Experience (continued)

Forever ⊕   2013-2014
Senior Software Developer   Pittsburgh, PA

- Prototyped and demoed for 24 the sketch known as "*flickr for dead people*" in 2 weeks in Python 3
- Ported entire system from Python to Ruby on Rails
- Enabled the company to move from 0 sales to strong market traction in under a year after releasing 1.0 e-commerce platform completed remotely with Neo

SMaSh - Brainstorm SMS Technologies (Mind Matrix) ⊕   2011 - 2012
Senior Engineer   Pittsburgh, PA

- Wrote conversational text systems (like twilio) in Python/PostgreSQL
- Supported large SMS text campaigns from Pittsburgh Steelers to Miller-Coors

Wellspring Worldwide ⊕   2010-2011
Software Development Manager   Pittsburgh, PA

- Pioneered SRE culture from legacy data center to SaaS VMWare CI/CD modernization with a team of 12 Engineers
- Built DevOps systems using Capistrano (Ruby), Mechanize (Python), and Selenium with dev team of 2 Sys Ops Engineers and 4 Test Ops Engineers

Applied Perception (Foster Miller (Qinetiq)) ⊕   2008-2009
Project Engineer   Pittsburgh, PA

- Visualized XML sonar data in python backend/C++ GUI application on Windows
- Ported Microsoft C#.net Windows GUI to C++/Qt/Linux for OCU deployment

NOMOS (North American Scientific, Best Medical) ⊕   2006-2007
UI Software Engineer   Pittsburgh, PA

- Contributed C++ QA tests and code reviews to CORVUS FDA-regulated radiation oncology product with dev team of 12 and QA team of 4
- Prototyped wireframes and rendered storyboards in C++/Python2/Qt for adaptive 4D treatment planning with team of 4

MAYA Design (BCG) ⊕   2004-2006
Software Design Engineer   Pittsburgh, PA

- Built python REST backends emitting JSON for consumption by AJAX frontends on dev team of 4 building dhs.net, A+ Schools, 3RC websites
- Demoed GUI floor-plan Zigbee wireless lighting designer IoT PoC in C#.net/COM/Visio on Windows for Lutron/Phillips 1 week from designer sketch

Cobind ⊕   2003-2004
Cofounder   Pittsburgh, PA

- Collaborated on Linux Tools startup with cofounder and consultant where we borrowed cobind concept signifying binding an app with its OS
- Received worldwide press from USA to Norway to Australia around Linux products after winning Idea Foundry Fellowship; wrote python2 ops code

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