Dav(id|e|o)? Watson

Software circles the liminal edges of innovation retrospecting the past and prototyping the future - now.

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Summary

Winning a computer science award before music school led to a computer programming internship after. Devoted years to developing data products, structuring software as services, and taming tool pipelines. Moved ideas to code, data to science, and markdown to markup : doc.

Experience

Wyvern — 2023-2024
Technologist (1099)   Nashua, NH

Defined Roadmap for Mongo, MySQL, NGINX, and Angular Full Stack TypeScript, Docker & Kubernetes Container Deployment abroad

Freelance — 2022
Software Design Engineer   Pittsburgh, PA

- Prototyped Personal Knowledge Management concept around GPT and Requests, experimented with data in Rust/Polars, and more

Caterpillar — 2021
Technical Consultant (1099)   Pittsburgh, PA

- Built Xilinx ZCU-104 PYNQ code from port of Terrain Visualization code on Intel using C++ GCC Linux by toggling FPGA feature flags in GCC without computational complexity analysis or optimization to gain 20%-50% time optimization for deployment on CAT grader

Carnegie Mellon University (Emerging Technology Center) — 2020
Senior Member of Technical Staff   Pittsburgh, PA

- Artificial Intelligence (AI), Human Computer Interaction (HCI), High Performance Computing (HPC); details redacted

Caterpillar — 2018-2020
Software Engineering Specialist (W-2)   Pittsburgh, PA

- Assembled Sensor Storage for Edge Network on Kubernetes to achieve Dev-Prod Parity using S3 as **protocol not product**, like Minio
- Collaborated with 12 IT execs on planning and implications of hyperconverged infrastructure, cloud native storage
- Tested prototypes related to Git for Data (like Pachyderm or LakeFS) with partner in Golang, optimizing space for 5 V's of big data

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

- Led weekly retro resulting in better communication, velocity, and teamwork via nimble methods like affinity diagrams and pairs work
- Crafted Scrapy crawler over Tor (python 3) to cover real estate frontier without detection on Django, PostgreSQL, and Kubernetes

Wellbridge Health — 2015-2016
VP Product Development, IT Compliance Officer   Pittsburgh, PA

- Built data analysis and tools from experiments in pandas and Python.
- Deprecated legacy App Store dependency using browser-based Ember SPA MVP designed and delivered in concert with MAYA Design
- Developed API backend on Python 3 - Django REST Framework, PostgreSQL emitting JSON API to Ember SPA on Aptible

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 Django system
- Reduced daily production firefighting by using nimble methods, automated tests, CI/CD, code review and design review

Forever   2013-2014
Senior Software Developer   Pittsburgh, PA

- Prototyped full-stack (Bootstrap to Heroku) on Proxmox-Gitlab quickly on Python 3 before porting MVP from Python to Ruby on Rails

- Enabled the company to capture strong market traction in just a year after releasing 1.0 e-commerce platform finished at Neo

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

- Wrote conversational text systems (like twilio) in Python, PostgreSQL, Flask, and Requests on Fedora Linux

- Supported large SMS text campaigns from Pittsburgh Steelers to Miller-Coors

Wellspring   2010-2011
Software Development Manager   Pittsburgh, PA

- Responsible for Sophia and Flintbox product development, deployment, and support

- Led team of 12 from slow legacy data center of more than 1M SLOC to fast, automated SaaS virtualization of CI/CD, DevOps, and SRE

- Prototyped systems using Capistrano (Ruby), Mechanize (Python), and Selenium with team of 4-7 software engineers

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

- Visualized XML sonar data in Python Beautiful Soup server and Microsoft Visual C++ GUI client on Windows for UUV deployments

- Ported Microsoft C# Windows GUI application to C++, Qt, Ubuntu Linux for OCU deployment of Talon Robot in EOD applications

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

- Coded C++ QA tests, maintained Perl code review system, CORVUS FDA-regulated product, team of 12, ~2M SLOC Mac

- Prototyped wireframes and rendered storyboards in C++/PyQt for adaptive 4D treatment planning with team of 4

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

- Deployed python web services emitting JSON to JDA clients on team of 4 developing A+ Schools, 3RC, DHS to win an award

- Demoed GUI lighting IoT Zigbee PoC in C#.net/COM/Visio on Windows for Phillips execs in 5 days sketch-to-code

Cobind   2003-2004
Cofounder   Pittsburgh, PA

- We borrowed cobind from DNA signifying *cooperative binding* - app/os tightly bound at build-time vs. loosely bound at run-time

- Collaborated on Linux Tools startup with cofounder and consultant. Received worldwide press acclaim after Idea Foundry Fellowship

- Progeny, Suse, RPath, and Timesys built linux online but few used browser as UI/UX then. Now *spins are in* - every distro has them.

Education

Duquesne University   BSBA
Coursework   Computer Science, Music Education, Technical Writing

Passion   Reading is Leading, Writing is Conceiving, Running is Muse-Dreaming

Books   Crystal Clear, Flow (Csikszentmihalyi), Lean Software (Poppendieck, Ries)

Continuing Education   Git Foundations 2012, PyCon 2019, MIT IAP 2012 RDBMS (Stonebraker)