Dav(id|e|o)? Watson

Software's Liminal Edges: Now is the space between retrospecting the past and prototyping the future

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Summary

Won a computer science award before music school. A computer programming internship followed. Devoted twenty years to developing data products, software services, and pipelines of tools. Moved ideas into code, and data into science, from dialog box to documentation.

Experience

Wyvern   2023-2024
Technologist (1099)   Nashua, NH

- Ally in MEAN Full Stack TypeScript Roadmap, Docker Compose & Kubernetes Software Development Lifecycle (SDLC)

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

- Xilinx ZCU-104 PYNQ is rare in that it exposes FPGA without embedded skills. Our port of Intel code gained 20%-50% time optimization using C++ GCC Linux by tweaking FPGA feature flags in GCC without computational complexity analysis or optimization

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 application on Windows

- Ported Microsoft C# Windows GUI application to C++, Qt, Ubuntu Linux for OCU deployment

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

- Stole cobind idea from R&D signifying app/os tightly bound at build-time vs. loosely bound at run-time

- Progeny, Suse, and Timesys built linux online but few if any used browser as UI/UX. Now *spins are in* - common to every distribution.

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

Education

Duquesne University   BSBA

Coursework   Computer Science, Music Education, Technical Writing

Continued Education   Git Foundations, PyCon, RDBMS@MIT

Books   Crystal Clear, Flow, Lean Software

Interests   Reading, Writing, and Running

Passion   Fasting Flows into Feasting