



David Neil Watson

Nimble software engineer shaping and shipping new tech stacks built by agile teams

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Summary

Won a **computer science** award before music school vaulted me into a **computer programming** internship. Designed data products, developed software services, and deployed tool pipelines. Moved ideas to code, data to science, and markdown to markup documentation.

Experience

Wyvern

2023-2024

Technologist (1099)

Nashua, NH

- Deprecated legacy code with Typescript Stack and Docker-Kubernetes deployment for 25% reduction in complexity

Freelance

2022

Software Design Engineer

Pittsburgh, PA

- Prototyped Personal Knowledge Management concept using GPT and Requests by building corpus from crawled frontier

Caterpillar

2021

Technical Consultant (1099)

Pittsburgh, PA

- Built ZCU-104 port of Terrain Visualization code using C++ GCC Linux enabling flags in GCC for 20%-40% improvement for demo

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 IT execs on planning and implications of cloud native storage burden to declarative vs fixed configuration

Rent Jungle (RainMaker (RealPage))

2016-2018

Senior Software Engineer

Pittsburgh, PA

- Led weekly retro resulting in better communication, velocity, and teamwork via agile 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

- 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 4 through a lean Python 3 redesign and refactoring of the entire UI/UX from legacy MVP Django system
- Reduced daily production firefighting by using agile methods, automated tests, CI/CD, code review and design review

Experience (continued)

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

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

Education

Duquesne University

Bachelor of Science in Business Administration

Coursework in

Computer Science, Decision Science, Systems Analysis, Technical Writing, and Music Education

Books

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

Continuing Education

Git Foundations, PyCon, MIT IAP RDBMS (Greenspun, Stonebraker)

Passion

Reading, Writing, and Running