

# David Watson

software=sum(code, data, people) x sum(culture, tools)

📍 Pittsburgh, PA 📞 (412) 614-9301 📧 david@davidwatson.org

## Summary

I help teams go-to-market nimbly by moving ideas from sketch to prototype. As a technical contributor from R&D labs to startups I've seen both sides now, crafting software that shapes complex data through APIs into usable UI/UX between cloud, desktop, and mobile. Shipping complete data products and software services makes software's value proposition clear from funding to launch to acquisition.

## Experience

### Caterpillar 🌐

2018-2021

Software Engineering Specialist

Pittsburgh, PA

- Assembled Sensor Storage on Kubernetes using Python, Minio, and PostgreSQL with a team of 4 collaborators
- Built terrain visualization software in C++/gcc on Xilinx ZCU-104 using PYNQ with a team of 4 collaborators

### Rent Jungle (RainMaker (RealPage)) 🌐

2016-2018

Senior Software Engineer

Pittsburgh, PA

- Led weekly retro resulting in 2x better cadence, velocity, and teamwork
- Crafted crawler using Python, Django, and PostgreSQL on Kubernetes stack

### Wellbridge Health 🌐

2015-2016

VP Product Development

Pittsburgh, PA

- Led 4-person interdisciplinary design team through HIPAA-compliant EmberJS SPA MVP designed by MAYA delivered before remote health was common
- Developed REST API using Python/Django, DRF and PostgreSQL serving EmberJS SPA on Aptible with 4-person development team

### Hire an Esquire (Major, Lindsey, and Africa) 🌐

2014

VP Engineering

Pittsburgh, PA

- Led a team of 6 through a lean and agile 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, and teachable moments during code review

### Forever 🌐

2013-2014

Senior Software Developer

Pittsburgh, PA

- Prototyped the sketch our designer called, "*flickr for dead people*" in a couple weeks. Our founder said, "*you hit the ball out-of-the-park*".
- Enabled the company to move from 0 sales to strong market traction online via e-commerce platform completed working remote-hybrid with Neo, Columbus

## Knowledge and Skills

### Linux

● ● ● ● ○

arch, debian, redhat, fedora, ubuntu

### MacOS

● ● ● ● ○

monterey, sequoia, BSD

### Windows

● ● ● ● ○

11, WSL 2

### Containers

Docker, Podman

● ● ● ● ○

### Virtualization

Heroku, Proxmox, Aptible

● ● ● ● ○

### Private Cloud

Kubernetes, k3s, minikube

● ● ● ● ○

k8s, helm

### Public Cloud

AWS, GCP, Azure

● ● ○ ○ ○

aws, gcp, azure

### Databases

MySQL, PostgreSQL, SQLite

● ● ● ● ○

### Frameworks

Django, Flask, Ruby on Rails

● ● ● ○ ○

RoR

## Programming Languages

### C++

Microsoft VS Code and GCC

● ● ● ○ ○

### Markup

HTML, CSS, MarkDown (MD)

● ● ● ○ ○

### Perl

● ○ ○ ○ ○

### Python

OO, functional, OOA, OOD

● ● ● ● ○

### Ruby

Ruby on Rails (RoR)

● ● ● ○ ○

### Shell

bash, fish, zsh

● ● ○ ○ ○

## Experience (continued)

### **Brainstorm SMS Technologies (Mind Matrix)** 🌐

**2011 - 2012**

Senior Engineer

Pittsburgh, PA

- Wrote conversational text systems (like twilio) in Python/PostgreSQL

### **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

Cranberry Township, PA

- Visualized XML sonar data in python, consumed by 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

Cranberry Township, 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++/Qt for adaptive 4D treatment planning with multidisciplinary 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
- Demoed GUI floorplan wireless lighting designer in C#.net on Windows for Lutron/Phillips 1 week from designer's sketch on interdisciplinary team

### **Cobind** 🌐

**2003-2004**

Founder

Pittsburgh, PA

- Collaborated on ideation, vision, and execution of custom Linux Tools startup with my cofounder and our PR consultant
- Received wide press acclaim around custom Linux products after winning Idea Foundry Fellowship and pairing with our PR consultant

## Continuing Education

### **Git Foundations Workshop** 🌐

Github

### **RDBMS and Internet Application Programming** 🌐

MIT

### **Python Conference** 🌐

PyCon

## Education

### **Duquesne University** 🌐

BS/BA

Business, Computer Science, Music

## Awards

### **Top 100 Award**

[Infoworld](#)

### **Transformation Fellowship**

[Idea Foundry](#)

### **Open Source & Social**

### **My First Contribution**

### **My Pull Request on Github**

### **My Github Profile**

### **My LinkedIn Profile**

## Technical Interests

### **AI - Beyond Dartmouth**

### **Bret Victor's Dynamicland**

### **Emergent Systems Architecture**

## Volunteering

### **American Diabetes Assoc.**

Board Member

Beaver, PA

### **American Cancer Society**

Driver

Beaver, PA

## Books I Believe

### **Accelerate**

### **Crystal Clear**

### **Interface Culture**

### **Lean Software**

### **Literate Programming**

### **Peopleware**

### **Realizing Empathy**

### **Software Takes Command**