



# David Watson

Human-Computer Peer-to-Pair Partner

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## Summary

A musician before and after I studied the meaning and sense-making of human-computer science, improvisation and orchestration are my natural sway. I grew up between a clinic, a library, and a music studio. Hence, my multimodal DiY way-of-working combines lab, library, and studio. Flexible to a fault, my biases are easy to state but hard to find : curious and dynamic, empathic and open organizations and culture.

## Experience

### Freelance

2020-present

- **Solo** Cultivating Cobind Desktop Community concept from 2004: Cosmic, Python, Rust, TWM - where latency matters **2024 - present**
- **Wyvern** (1099) Roadmapped port of legacy code to Docker, Kubernetes, and Typescript infrastructure with team of four **2023-2024**
- **Paired** with design peer prototyping Personal Knowledge Management on GPT-Requests by building corpus from crawled frontier **2022**
- **Caterpillar** (1099) Built ZCU-104 Terrain Visualization using GCC flags for required performance boost for demo GTM decision **2021**
- **Carnegie Mellon University** Artificial Intelligence (AI), Human Computer Interaction (HCI), High Performance Computing (HPC) **2020**

### Caterpillar

2018-2020

Software Engineering Specialist

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 (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

- Led Sophia and Flintbox teams from 1M SLOC data center to automated SaaS virtualization of CI/CD, DevOps, and SRE code culture
- 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

- Won award for python web services emitting JSON to JDA clients on team of 4 developing A+ Schools, 3RC, humanservices.net
- Demoed GUI lighting IoT Zigbee PoC in Microsoft C#/COM/Visio on Windows for Phillips execs in 5 days sketch-to-code

### Cobind

2003-2004

Cofounder

Pittsburgh, PA

- Designed DiY Linux Tools, YUMGUI, Desktop ISO with cofounder; Won worldwide press acclaim after Idea Foundry Fellowship GTM

## Education

Duquesne University (Courses: Business, CS, Tech Writing)

BS Continuing Education MIT IAP & RDBMS (Greenspun-Stonebraker)