

# David Watson

From imaginative ideas to symbolic prototypes to unknowable utility in the real release: software's infinite extensibility is full-stack.

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## Experience

### Freelance

2020-present

Software Design Engineer

Hybrid

- **Solo** Recapitulation of Cobind Desktop Community from 2004: Rust, Cosmic Tiling Window Manager @ Carnegie Coffee **2024 - present**
- **Wyvern** (1099) Roadmapped port of legacy code to Docker, Kubernetes, and Typescript infrastructure **2023-2024**
- **Pairing** with design peer prototyping PKM with GPT and Requests by building corpus from crawled frontier @ KLVN Coffee **2022**
- **Caterpillar** (1099) Built ZCU-104 Terrain Visualization using GCC flags for 30% performance boost quickly, inexpensively **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

### 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

## Experience (continued)

### 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 [UUU](#) 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 (Coursework in Computer Science, Music Education, Technical Writing)

Bachelor of Science

### Continuing Education

MIT IAP & RDBMS (Greenspun-Stonebraker)

## Passion and Interests

**Arranging and Teaching Music** Started the Percussion Program at Mars High School

**Performing and Writing Music** Gigs Live and Studio from Classical to Jazz

**Cycling and Running** Bicycling, Motorcycling, and Marathons Commuting