

# David Watson david@davidwatson.org

## Summary

I help teams design, develop, and deploy software. I'm comfortable working alone, in pairs, or groups establishing consensus among competing constraints.

My work has spanned desktop to data center and mobile to cloud in a variety of business domains from startups to small research labs.

I've worked primarily in C++ and Python on Linux, Mac, and Windows.

Using a variety of tools such as Docker, Kubernetes, and PostgreSQL provides teams with a common foundation for building software.

When I'm not working, I like to bike, run, and ski. I relax by reading, writing, and reflecting.

## Experience

### Software Engineering Specialist *Caterpillar* 2018-2020, 2021

- Contributed code and review to multiple projects within autonomy group
- Consulted with several groups on their use of docker containers and CI/CD

### Member of Technical Staff *Carnegie Mellon University* 2020

- Contributed to Emerging Technology Center within Software Engineering Institute
- Work included High Performance Computing, data engineering, and Human Computer Interaction

### Senior Software Developer *Realpage* 2016 - 2018

- Contributed code and process to software engineering team
- Implemented crawler data pipeline using Python, PostgreSQL, Docker, and Kubernetes

### VP Product Development *Wellbridge Health* 2015 - 2016

- Led development team through replacement of legacy prototype with new product
- Designed and implemented REST API using DRF and PostgreSQL on web and mobile

### VP Engineering *Hire an Esquire* 2014

- Led engineering team from rough prototype to mature product
- Refactored Python, Django, and PostgreSQL stack

### Senior Software Developer *Forever* 2013 - 2014

- Contributed code from prototype to product
- Wrote Python, Flask, MongoDB prototype, productionized Ruby on Rails, PostgreSQL

### Senior Engineer *Smash* 2011 - 2012

- Contributed code to internal systems supporting daily operations
- Designed and implemented conversational text systems and REST interfaces in python

### **Software Development Manager   *Wellspring*   2010 - 2011**

- Led development team from legacy data center to SaaS virtualization
- Prototyped DevOps (CI/CD) approach using Capistrano, Mechanize, and Selenium

### **Project Engineer   *Applied Perception*   2008-2009**

- Contributed code to teams working on military robotics projects (DARPA)
- Visualized XML sonar data in python, ported Microsoft C#.net Windows GUI to C++/Qt/Linux

### **UI Software Engineer   *Nomos*   2006 - 2007**

- Contributed code, tests, and review to several radiation oncology software products
- Prototyped wireframes and storyboards in C++/Qt for adaptive 4D treatment planning

### **Software Design Engineer   *MAYA Design*   2004 - 2006**

- Contributed design, analysis, and code across numerous consulting projects
- Coded AJAX backends in python and a wireless lighting system in C# for Philips

### **Co-Founder   *Cobind*   2003 - 2004**

- Partnered on ideation, vision, and execution of custom Linux Tools startup
- Received wide press acclaim around custom Linux products after winning Idea Foundry Fellowship

### **Senior Software Engineer   *MSA*   2000-2003**

- Contributed code, data, and deployment before and after startup acquisition
- Implemented product import systems providing Excel VBA API from spreadsheet to database

### **Member of Technical Staff   *CA*   1995-2000**

- Contributed code to Automation Point, Raveler, and CA-Unicenter products
- Coded C++ GUI code for Legent and Platinum, before and after CA acquisition

### **Programmer-Analyst   *Mellon*   1992-1995**

- Contributed code to Executive Workbench asset management product
- Implemented multi-threaded, event-driven C++ GUI code on OS/2

### **Programmer-Analyst   *USX*   1990-1992**

- Contributed code to internal data center systems automation
- Automated data center operations in C/HLLAPI on OS/2 from a networked PC

## **Sites**

- [GitHub](#)
- [LinkedIn](#)

## **Education**

- Bachelor of Science, *Duquesne University* 1991