

[David Watson GitHub LinkedIn](#)

Summary and Skills

I help teams design, develop, and deploy software. My work has ranged from desktop to data center, mobile to cloud, and startups to research labs. I'm comfortable working alone, in pairs, or in teams; private or shared office; hybrid or remote, home or coworking space. I began working remotely in 1999, from Boston to Seattle.

Operating Systems and Programming Languages

I'm productive working on Linux, MacOS, and Windows. I just need a Unix-like OS - Linux, MacOS (BSD) and Windows (WSL2) qualify.

Since 2005, I've worked primarily in Python, secondarily in C++. Prior to 2005 I've worked primarily in C++, secondarily in Python.

Containerization and Virtualization

I've used containerization tools like Docker since 2015, Orchestration tools like Kubernetes since 2017, and virtualization tools like VMWare since 2000.

Databases and Methods

PostgreSQL has been my goto database environment since 2010, since it has managed both structured and unstructured data for years.

I work in an iterative style, from napkin sketch to provisional prototype, reflecting on design and engineering, shipping, and repeating the process.

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

Education

- Bachelor of Science, *Duquesne University* 1991

