

David Watson david@davidwatson.org

Summary

I help teams design, develop, and deploy software.

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

Working primarily in C++ and Python on Linux, Mac, and Windows, but using a variety of tools such as Docker, Kubernetes, and PostgreSQL provides teams with a common foundation for building software.

By automating the efficient part (CI/CD) and focusing design-development teams on the inefficient part, provides better results faster.

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

Education

- Bachelor of Science, *Duquesne University* 1991