

[DAVID@DAVIDWATSON.ORG](mailto:DAVID@DAVIDWATSON.ORG) [GITHUB](#) [LINKEDIN](#) [STACKOVERFLOW](#)

## Summary & Skills

Help teams design, develop, and deploy software. Work has ranged from desktop to data center, mobile to cloud, startups to research labs. Comfortable working alone, in pairs, or teams; private or shared office; hybrid or remote, home or coworking space. Began working remotely in 1999 - lived in Seattle, worked in Boston.

## Operating Systems & Programming Languages

Productive working on Linux, MacOS, and Windows. Unix-like OS - Linux, MacOS (BSD) and Windows (WSL2) suffice.

Since 2005, worked mostly in Python, occasionally in C++ or Ruby. Prior to 2005 worked mostly in C++, occasionally in Perl, Python, or Ruby.

## Containerization & Virtualization

Used containerization tools like Docker since 2015, Orchestration stacks like Kubernetes since 2017, and virtualization products like VMWare since 2000.

## Databases & Methods

Used PostgreSQL for more than a decade for its support for structured data, unstructured data, and numerous added value extensions plus a wide variety of cloud container deployments that make dev-prod parity straightforward.

Tailored agile from a synthesis of ideas like [agile as a sensemaking platform](#) where weekly product rhythm is established by planning Monday, product touch-point mid-week, and sense-making Friday.

## Experience

### Software Engineering Specialist [Caterpillar](#) 2018-2020, 2021

- Built, reviewed and profiled C++ code on Linux from Intel x86 to ARM FPGA for RC Terrain Visualization
- Guided company-wide directives on docker container usage for build engineering and CI/CD on Azure

### Member of Technical Staff [Carnegie Mellon University](#) 2020

- Contributed to Emerging Technology Center within Software Engineering Institute
- Worked on HPC, MLOps, and HCI in concert with National Robotics Engineering Center

### Senior Software Developer [Realpage](#) 2016 - 2018

- Led weekly retrospectives to improve cadence, velocity, and teamwork
- Implemented crawler data pipeline using Python, Django, PostgreSQL, Docker, and Kubernetes on AWS

### VP Product Development [Wellbridge Health](#) 2015 - 2016

- Led development team through replacement of HIPAA-compliant MVP with fresh design from MAYA
- Implemented REST API using Python/Django, DRF and PostgreSQL serving EmberJS SPA on Aptible

## **VP Engineering** [Hire an Esquire](#) 2014

- Led engineering team to reduce technical debt, simplify, and skin MVP
- Refactored Python, Django, and PostgreSQL stack with vanilla Django and Bootstrap frontend

## **Senior Software Developer** [Forever](#) 2013 - 2014

- Wrote Python, Flask, MongoDB proof-of-concept demonstrating photo sharing and storage on Heroku
- Productionized design using Ruby on Rails, PostgreSQL, AWS

## **Senior Engineer** [BrainStorm](#) 2011 - 2012

- Contributed python, postgresQL code to internal systems supporting daily operations
- Designed and implemented conversational text systems (like twilio) and REST interfaces in python

## **Software Development Manager** [Wellspring](#) 2010 - 2011

- Led devops from legacy data center to SaaS VMWare deployment
- Prototyped CI/CD approach using Capistrano (Ruby), Mechanize (Python), and Selenium

## **Project Engineer** [Qinetiq](#) 2008-2009

- Visualized XML sonar data in python, consumed by C++ GUI application on Windows
- Ported Microsoft C#.net Windows GUI to C++/Qt/Linux for OCU deployment

## **UI Software Engineer** [Nomos](#) 2006 - 2007

- Contributed C++ QA tests and code reviews to CORVUS FDA-regulated radiation oncology product
- Prototyped wireframes and rendered storyboards in C++/Qt for adaptive 4D treatment planning

## **Software Design Engineer** [MAYA Design](#) 2004 - 2006

- Built REST backends in python emitting JSON for consumption by proprietary AJAX frontends
- Implemented a Zigbee wireless lighting system in C# on Windows 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 backend product import systems providing Excel VBA API from spreadsheet to database

## **Member of Technical Staff** [CA](#) 1995-2000

- Built C++ GUI for Legent (Automation Point) and Platinum (Raveler), before acquisition by CA
- Wrote C++ code for CA-Unicenter products after CA acquisition

## **Education**

- Bachelor of Science Concentration in Business, CS, and Music Duquesne University 1991