

[David Watson GitHub LinkedIn](#)

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.

Used an agile style from ideas like [agile as a sensemaking platform](#). Weekly product rhythm is established by decision-making (roadmap) Monday, touching base loosely mid-week, and sense-making (reflection) on 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 *Smash* 2011 - 2012

- Contributed python, postgresSQL 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 *Applied Perception* 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 several FDA-regulated radiation oncology products
- 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 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

Programmer-Analyst *Mellon* 1992-1995

- Wrote multi-threaded, event-driven, C++ GUI for Executive Workbench asset management product

Programmer-Analyst *USX* 1990-1992

- Automated data center ops in BASIC and C by building a CLI over HLLAPI on OS/2 from a networked PC

Education

- Bachelor of Science Concentration in Business, CS, and Music *Duquesne University* 1991
- RDBMS and Internet Application Programming Phillip Greenspun and Michael Stonebraker *MIT* 2012