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. Comfortabljkjke 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, 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   *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, Computer Science, and Music   *Duquesne University*   1991
- RDBMS and Internet Application Programming   Phillip Greenspun and Michael Stonebraker   *MIT*   2012