

[david@davidwatson.org](mailto:david@davidwatson.org)   

## Summary & Skills

Helped design, develop, and deploy software across desktop, internet, and mobile platforms while soloing, pairing, or teaming in office, hybrid, or remote settings.

### Operating Systems & Programming Languages

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

Since 2005, wrote Python daily, C++ or Ruby occasionally. Prior to 2005 wrote C++ daily, Perl, Python, or Ruby occasionally.

### Containerization & Virtualization

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

### Markup & Markdown

Prefer markdown, plain text, or markup for a variety of technical documentation, including this resume.

### Databases & Methods

Used PostgreSQL since 2008 for its native support for structured and unstructured data and numerous extensions [Citius](#), [PostGIS](#), [JSONB](#)) plus a wide variety of cloud deployments that make [dev-prod parity](#) straightforward.

Tailored [agile](#) based on a synthesis of research from [Alistair Cockburn](#), [Allen Holub](#), [Bonnitta Roy](#), and [Ron Westrum](#), where what matters is what works for the team, its culture and its unique idiosyncracies.

## 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 HIPAA-compliant [MVP](#) with SPA UX 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 redesign and simplify [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
- Built CI/CD systems 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

## **Role**

- Help a small team deliver impactful, high quality, and valuable software incrementally

## **Education**

- Bachelor of Science   Duquesne University   1991