

David Watson david@davidwatson.org

Summary

I help teams design, develop, and deploy software. I've evolved the process from years of proprietary and open source work in R&D labs and startups from data centers to cloud native.

My teams have shipped products by defining, designing, and reflecting, then iterating, evolving, and automating until shipping a complete product begins the product lifecycle anew.

I enjoy working with small, peer teams on emergent technology whose organic complexity is high enough that the team's role is to reduce synthetic complexity through design.

Experience

Software Engineering Consultant, *Caterpillar* 2018-2020, 2021-present

- Contributed code and process to multiple projects within autonomy groups
- Prototyped ingestion, storage, and annotation of CV and ML data

Member of Technical Staff, *Carnegie Mellon University* 2020

- Contributed to Emerging Technology Center within Software Engineering Institute
- Work included high performance computing, ML, and HCI

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 group through replacement of legacy prototype with usable 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, ported to 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* 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 startup
- Delivered custom Linux tools 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 effort
- Automated data center operations in C and HLLAPI on OS/2 from a networked PC

Education

- Bachelor of Science, *Duquesne University* 1991