David Watson david@davidwatson.org

Summary

I help teams design, develop, and deploy commercial software. That software has spanned proprietary and open source approaches to content management systems, data center automation, enterprise software, and systems management.

My teams have shipped products by starting with a process of defining, prototyping, and iterating followed by reflecting, automating, and evolving. I enjoy working with small teams on emergent technology stacks that cannot be fully understood without a multidisciplinary, sensemaking approach.

When I'm not working, I like to I like to be active, outside, with my dog. In 2021, I finished two 5Ks, one 10K, and a half-marathon - the latter of which I medaled in my age group. I'm a competive person.

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 vision and execution of startup
- Delivered custom Linux tools after winning Idea Foundry Fellowship

Senior Software Engineer, *Management Science Associates* 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*