

**David Watson** david@davidwatson.org

## Highlights

I help software teams [make sense](#) of data, [construct meaning](#) from code, and [improve process](#) while building APIs, apps, and pipelines. By mixing ideas from agile, devops, and lean startup, my teams work together to improve the [design](#), [development](#), and [deployment](#) of software from cloud to desktop and mobile.

## Quotes from Coworkers

He can be an amazing listener and quickly developed rapport with most people. He also has a genuine interest in nurturing and mentoring others to help them achieve their goals.

But what strikes you the most when working with David is his ability to see the bigger technological picture and his painstaking attention to subtle nuances of detail.

## Experience

### Software Engineering Specialist, Caterpillar 2018 - 2020

Pittsburgh Automation Center focuses on R & D related to autonomous vehicles.

- Designed a data management system for computer vision sensors on autonomous vehicles
- System enabled data collection and ingestion to support labeling, training, and inference

### Senior Software Developer, Realpage 2016 - 2018

Realpage provides real estate property management software solutions.

- Reverse-engineered property type classification in Elastic Map Reduce (EMR)
- Implemented a new crawler data pipeline using python, RethinkDB, Docker, and Kubernetes
- Led retrospectives and related agile process improvements

### VP Product Development, Wellbridge Health 2015 - 2016

Wellbridge is a digital health provider of telemedicine solutions.

- Managed IT, HIPAA compliance, and product development
- Recruited data science PhDs to develop population statistics
- Launched design and implementation of new tech stack with MAYA Design
- Built Django REST JSON API using PostgreSQL to EmberJS SPA on web and mobile
- Deprecated legacy tech stack including native mobile app to reduce technical debt
- Implemented Docker stack including Continuous Integration and Deployment (CI/CD) on Aptible

### VP of Engineering, Hire an Esquire 2014

Hire an Esquire provides a system for connecting the legal industry with legal contractors.

- Led the engineering team through refactoring the Python, Django, and PostgreSQL tech stack
- Led the technical team through agile process improvements to cadence, code quality, and velocity
- Led the design and engineering team through complete redesign of the user experience
- Recruited technical and design staff

### Senior Software Developer, Forever 2013 - 2014

Forever provides a secure, private cloud SaaS for sharing digital memories online.

- Built the company's first prototype of the system in Flask, Python, and MongoDB
- Ported the prototype to Ruby on Rails and PostgreSQL for production deployment
- Completed multi-user upload, display, and download features
- Implemented automated unit tests in Ruby DSL
- Recruited technical and design staff

## Senior Engineer, Smash 2011 - 2012

Smash provides a system to create SMS campaigns for large commercial clients.

- Designed and implemented conversational text systems and REST interfaces in python
- Supported client SMS text campaigns including Pittsburgh Steelers and Miller-Coors

## Software Development Manager, Wellspring 2010 - 2011

Wellspring offers intellectual property and tech transfer management software to academic and commercial organizations.

- Led the design and implementation of test automation using Selenium
- Led the design and implementation of Continuous Integration and Deployment (CI/CD) pipelines
- Collaborated with devops engineers on site reliability engineering around VMWare private cloud
- Supported existing customers in the field
- Recruited technical staff

## Project Engineer, Applied Perception 2008-2009

Applied Perception built robotics for the military.

- Implemented a python program on Windows to visualize XML data from an unmanned submarine
- Ported a Windows C#.net GUI to C++/Qt on Linux which controlled the Talon robot

## UI Software Engineer, Nomos 2006 - 2007

Nomos provided radiotherapy devices for cancer treatment.

- Built wireframes, storyboards, and prototypes in C++/Qt for an adaptive 4D treatment system.
- Performed FDA-related QA work on the Mac version of NOMOS treatment planning software, Corvus

## Software Design Engineer, MAYA 2004 - 2006

MAYA is a design consultancy and innovation lab.

- Implemented web-based systems in python for A+ Schools, humanservices.net, and 3 Rivers Connect
- Implemented a Zigbee wireless lighting system in Microsoft C#.net for Philips

## Co-Founder, Cobind 2003 - 2004

Cobind was a startup enabling anyone to build custom Linux distributions via a web browser.

- Discussed features and functions with potential custom Linux customers to determine feature matrix
- Collaborated on the design of Cobind Desktop, a Linux distribution we dog-fooded for testing
- Built marketing collateral collaboratively with our marketing team

## Skills

### Platform

Linux  
MacOS  
Windows

### Language

C++  
Python  
JavaScript

### Stack

JQuery  
Flask/Django  
PostgreSQL

### Network

HTTP  
REST  
TCP/IP

### Automation

Git  
Docker  
Kubernetes

### Methods

Agile  
DevOps  
Lean

## Awards and Open Source

*Infoworld Top 100 Award* 2006

*Idea Foundry Fellowship* 2004

[Github Profile](#)

## Courses and Education

*AWS/EKS* Amazon, 2019

*RDBMS* MIT, 2012

Bachelor of Science, *Duquesne University* 1991