

David Watson

d@davidwatson.org

1314 Arrowood Drive



(412) 614-9301

Pittsburgh, PA 15243

Software engineer manifesting novel ideas in emerging technology products and services 🌐

My passion is **learning** by **creating**, **producing**, and **reflecting**. Some call it *action learning*.

A computer science **award** enabled me to pivot my education as a music school dropout. Finished the **BS** at night as a data center programming **internship** ignited my love for software.

Honed my craft **automating** operations, **developing** user interfaces, and **managing** Unix systems.

As the **Unix** sun set on my early career, the **Linux** sun rose on a **fellowship** catalyzing my **startup**. Roles followed from rapid **prototyping** to automated **deployment** to **remodeling** MVP→MAYA: *Minimum Viable Products*→*Most Advanced Yet Acceptable*.

My management roles are best described as *moderator to the middle road from conflict to consensus* Moving consensus from possible to probable is sensemaking, whether it was **agile**, **lean**, or **scrumban**.

Experience (W-2)

Senior Member of Technical Staff [Carnegie Mellon University](#) 2020

- Research & development on AI, HPC, and HCI within [SEI](#) Emerging Technology group

Software Engineering Specialist [Caterpillar](#) 2018-2020

- Design and deliver innovative infrastructure to support the company's autonomous vehicles
- Collaborated with IT to transform data storage provisioning from data center to cloud to cloud native
- Improved forward progress moving prototype toward shipping product

Senior Software Developer [Rent Jungle](#) 2016-2018

- MVP in production challenged growing client dands with unsustainable devops opportunity costs
- Designed crawler data pipeline in Docker/Kubernetes on Mac to AWS Python/Postgres & MySQL
- Managed daily sessions with team to establish cadence, pairs work, and engineering confidence

VP Product Development [Wellbridge Health](#) 2015-2016

- MVP supported pilots, but MVP was not market-ready for production deployment
- As CISO, IT Director, and VP Product, deprecated MVP; designed and built behavioral health platform
- Designed and built Django/Postgres API plus Aptible deployment while MAYA completed UX SPA

Senior Software Developer [Forever](#) 2013-2014

- Series A startup with concept to provide digital storage for 100 years
- Prototyped MVP in Python, Flask, Mongo; Wrote production system in Ruby/Rails on Heroku/Postgres
- Forever continues to sell storage product while integrating complementary assets via M&A

Senior Engineer [SMaSh](#) 2011-2012

- Juggled customer service & support from Pittsburgh Steelers to Miller Coors plus new development
- Built conversational text interface to track diabetic glycemia in Python/Flask/Postgres, and Heroku
- Worked through a funding shortage and company was eventually acquired by Mind Matrix

- | | | |
|---|--------------------------------------|-----------|
| Software Development Manager | Wellspring Worldwide | 2010-2011 |
| <ul style="list-style-type: none"> ▪ Wellspring had a million lines of code in its product, but no tests or automation and data center ▪ Transformed ops from fire-fighting to automated CI/CD pipeline on Capistrano, Mechanize, and Selenium ▪ Wellspring is still operating independently today after moving from Pittsburgh to Chicago | | |
| Project Engineer | Applied Perception | 2008-2009 |
| <ul style="list-style-type: none"> ▪ Applied Perception built nascent robotics for military clients ▪ Ported C# GUI to Linux OCU in C++/Qt; Coded Python XML sonar parser/viz to bridge C++ GUI to UUV ▪ Applied Perception was first acquired by Foster-Miller, then Foster-Miller was acquired by QinetiQ | | |
| UI Software Developer | Nomos | 2006-2007 |
| <ul style="list-style-type: none"> ▪ Nomos built radiotherapy treatment planning hardware and software products on Mac OSX ▪ Wrote C++ QA tests for Corvus radiation oncology product; Prototyped 4D design in C++/Qt ▪ Nomos was acquired by North American Scientific, then acquired by Best Medical. | | |
| Software Design Engineer | MAYA Design | 2004-2006 |
| <ul style="list-style-type: none"> ▪ MAYA was a design studio and technology research lab founded by 3 CMU professors circa 1989 ▪ Built AJAX stack on Linux & Mac Python and NoSQL DB; built predecessor to Hue C#.net for Philips ▪ MAYA was acquired by BCG and operates today as BCG Platinion | | |
| Co-Founder | Cobind | 2003-2004 |
| <ul style="list-style-type: none"> ▪ Conceived, marketed and launched startup to build custom Linux distros online ▪ Designed, built, and shipped the Cobind Desktop - PoC of the DIY build tools ▪ Reached a worldwide audience quickly using free media and our website via word-of-mouth marketing | | |

Experience (1099)

- | | | |
|--|---------------------------------|------|
| Technical Consultant | Caterpillar | 2021 |
| <ul style="list-style-type: none"> ▪ Built and profiled terrain visualization C++ code ported from Intel to Xilinx ZCU-104 | | |
| Technical Consultant | TenthRow | 2009 |
| <ul style="list-style-type: none"> ▪ Designed and built live music experience via streaming to fans worldwide | | |
| Usability Consultant | MAYA Design | 2008 |
| <ul style="list-style-type: none"> ▪ Collaborated with MAYA Design on usability of Bayer Diabetes Blood Sugar Monitor | | |
| Technical Consultant | Zenit Solutions | 2008 |
| <ul style="list-style-type: none"> ▪ Designed and implemented python system to track movers via PostGIS and web2py | | |

Education and Awards

Duquesne	Bachelor of Science	InfoWorld	Top 100 Award
MIT (CE)	RDBMS and IAP	Idea Foundry	Transformation Fellowship