

**David Watson**



d@davidwatson.org

(412) 614-9301

1314 Arrowood Drive

Pittsburgh, PA 15243

## Software engineer manifesting novel ideas in nascent 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 were all *peer moderator to the middle road from conflict to consensus* Moving consensus from possible to probable is a combination of meaning-making and sense-making, 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 providgital 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

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

**Experience (1099)**

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

**Education and Awards**

- |          |                                     |              |   |
|----------|-------------------------------------|--------------|---|
| Duquesne | <a href="#">Bachelor of Science</a> | InfoWorld    | <a href="#">Top 100 Award</a>             |
| MIT (CE) | <a href="#">RDBMS and IAP</a>       | Idea Foundry | <a href="#">Transformation Fellowship</a> |