

**David Watson**



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## Summary

**tldr**; A decade of C++ on Windows, a decade of Python on Mac, a decade of Postgres on Linux.

My computer science **merit award** rescued my education as a music school dropout. Finished the **BS** at night while a data center programming **internship** ignited my passion for software.

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

As the **Unix** sun set on my first decade, the **Linux** sun rose as a **fellowship** catalyzed my **startup**, Cobind.

The next decade's roles included rapid prototyping, automated deployment, and remodeling legacy systems.

My management roles have included playing moderator to the middle road from conflict to consensus. Consensus wasn't always required, which is what gave rise to sensemaking **agile**, **lean**, or **action learning**.

## Experience (W-2)

### Senior Member of Technical Staff

[Carnegie Mellon University](#)

2020

- Worked as a member of the Emerging Technology group which became the AI division
- Projects included Artificial Intelligence, High Performance Computing, Human Computer Interaction

### 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 providigital 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 glycia 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

- 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

- 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

- 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

- 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

- 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

- Built and profiled terrain visualization C++ code ported from Intel to Xilinx ZCU-104

**Technical Consultant**      [TenthRow](#)      2009

- Designed and built [live music experience](#) via streaming to fans worldwide

**Usability Consultant**      [MAYA Design](#)      2008

- Collaborated with MAYA Design on usability of Bayer Diabetes Blood Sugar Monitor

**Technical Consultant**      [Zenit Solutions](#)      2008

- Designed and implemented python system to track movers via PostGIS and web2py

## Education and Awards

**Duquesne**      [Bachelor of Science](#)  
**MIT (CE)**      [RDBMS and IAP](#)

**InfoWorld**      [Top 100 Award](#)  
**Idea Foundry**      [Transformation Fellowship](#)