# David Watson (412) 376-7565

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# **Summary**

Programmer cycling prototype experiments to design, develop, and deploy complete, productized, commercial software.

### Objective

Craft software with a caring, daring, reflective team of creatives sharing common aesthetics, methods, and tools.

# **Knowledge and Skills**

| Platforms/th> | Language         | Database        | Cloud      |
|---------------|------------------|-----------------|------------|
| Linux         | C/C++            | Postgres        | Docker     |
| MacOS         | HTML/CSS/JS      | SQLite          | Kubernetes |
| Windows       | Python           | Redis           | Proxmox    |
| Architecture  | Integration (CI) | Deployment (CD) | Frameworks |
| API           | Jenkins          | Aptible         | Django     |
| HCI           | Circle CI        | Capistrano      | Flask      |

# **Long-Term Experience**

| SE Specialist   | Caterpillar  | 2018-2020             |  |  |
|---|--|-----------------------|--|--|
| Designed storage system on Kubernetes; Worked with IT to make provisioning private cloud infrastructure feasible        |  |                       |  |  |
| Senior SW Dev   | Rent Jungle  | 2016-2018             |  |  |
| Coded crawler data pipeline from  | n Docker and Kubernetes on Linux & Mac to AWS in Python wit    | h Postgres & MySQL    |  |  |
| VP Product  | Wellbridge Health  | 2015-2016             |  |  |
| Led product development team  | from MVP to telehealth sensor system in Python, Flask, Django, | Postgres, and Aptible |  |  |
| Senior SW Dev   | <u>Forever</u>   | 2013-2014             |  |  |
| Prototyped MVP in Python, Flask, NoSQL; Ported system to Ruby/Rails/Postgres for production deployment on Heroku        |  |                       |  |  |
| Senior Eng.   | SMaSh  | 2011-2012             |  |  |
| Built conversational text interface to track blood glucose for diabetes patients in Python, Flask, Postgres, and Heroku |  |                       |  |  |
| SD Mgr.   | Wellspring   | 2010-2011             |  |  |
| Transformed legacy ops from data center to automated CI/CD SaaS deployment cutting daily support to near zero           |  |                       |  |  |
| Project Eng.  | Applied Perception   | 2008-2009             |  |  |
| Ported C#.net GUI to Linux OCU in C++/Qt; Programmed Python XML sonar parser/viz between C++ GUI & HULS                 |  |                       |  |  |
| UI SW Eng.  | <u>Nomos</u>   | 2006-2007             |  |  |
| Automated QA tests in C++ for Corvus radiation oncology product; Prototyped adaptive 4D radiotherapy in C++/Qt          |  |                       |  |  |
| SW Design Eng.  | MAYA Design  | 2004-2006             |  |  |
| Developed web stack on Linux & Mac in Python and NoSQL database; built predecessor to Hue in C#.net for Philips         |  |                       |  |  |
| Co-Founder  | Cobind   | 2003-2004             |  |  |
| Won an Idea Foundry Transformation Fellowship; launched DIY Linux Tools startup; built custom Linux distros online      |  |                       |  |  |
| Senior SW Eng.  | Management Science Associates                                  | 2000-2003             |  |  |
| Created VBA plugin enabling remote product import over SOAP protocol from Microsoft Excel to product database           |  |                       |  |  |
| Principal MTS   | CA, Legent, Platinum   | 1995-2000             |  |  |
| Wrote GUI features (CMS, NMS) in C++ on Windows and OS/2 for Automation Point, Raveler, and Unicenter products          |  |                       |  |  |

#### **Short-Term Experience**

Consultant Caterpillar 2021

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

Senior MTS Carnegie Mellon 2020

At SEI, collaborated with groups from ATAK, Intel and NREC supporting projects like AI, HCI, and HPC in C++ and Python

VP Engineering Hire an Esquire 2014

Led redesign, refactoring, and deployment of ground-up demolition of legacy Python, Django, Postgres web stack

Senior SW Eng. PPG 2007

Member of team building and shipping C++ code for Spectrophotometer used in 40,000 body shops

Consultant Zenit Solutions 2008

Designed and implemented python reporting system in web2py and postgresql to track movers via PostGIS and web2py

Consultant <u>TenthRow</u> 2009

Designed and built TenthRow - a web-based system to deliver alive music experience via streaming to fans worldwide

Consultant MAYA Design 2008

Colaborated with MAYA Design human sciences group on Bayer Diabetes Blood Glucose Monitor

#### **Awards**

Infoworld Top 100 Award 2006

Design and delivery of MAYA's DHS humanservices.net project

Idea Foundry Transformation Fellowship 2003

Startup (Cobind) Seed Investment and Entrepreneurial Support

#### **Open Source**

Programmer Github Issues Report 2017

Coordinated code and configuration from the team at Rent Jungle

Programmer BodyTrace API, PostgREST 2015

Wrote the BodyTrace API and the PostgREST server while prototyping the Wellbridge Health JSON-API to EmberData

Programmer Marquee 2003

Contributed the servlet implementation to Marquee XML-RPC library

#### Quotes From Coworkers

- He's smart, dedicated and diligent.
- He genuinely cares about the users of systems he's building.
- ➡ He also has a genuine interest in nurturing and mentoring others to help them achieve their goals.
- → His sense of business, technology, knowledge and insights into usability makes him a great collaborator.
- The He's more like a music producer than the typical software engineer, and this leads to creative solutions.

#### **Education and Learning**

| PyCon    | Python Conference                          | 2018-2019 |
|----------|--|-----------|
| Github   | Git Workshop                               | 2012      |
| MIT (CE) | RDBMS and Internet Application Programming | 2012      |
| Duquesne | Bachelor of Science                        | 1991      |