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## Summary

Prototype programmer using R&D experiments to count things that count: shipping productized software.

## Objective

Design, develop, and deploy software with small teams joined by [aesthetics](#), [methods](#), and [tools](#).

## Skills

| Platforms | Languages   | Frameworks | Database | Public Cloud |
|-----------|-------------|------------|----------|--------------|
| Linux     | C/C++       | Django     | Postgres | AWS          |
| MacOS     | HTML/CSS/JS | Flask      | SQLite   | Azure        |
| Windows   | Python      | Rails      | Redis    | GCP          |

| Integration (CI) | Deployment (CD) | Architecture | Private Cloud | Methods     |
|------------------|-----------------|--------------|---------------|-------------|
| Jenkins          | Aptible         | API          | Docker        | Agile       |
| Circle CI        | Capistrano      | HCI          | Kubernetes    | Lean        |
| GitOps           | Shippable       | Cloud Native | Proxmox       | Sensemaking |

## Long-Term Experience

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

## Short-Term Experience

|   |                                 |      |
|---|---------------------------------|------|
| <b>Contract Technical Consultant</b>  | <a href="#">Caterpillar</a>     | 2021 |
| Built and profiled terrain visualization C++ code ported from Intel to Xilinx <a href="#">ZCU-104</a>                               |                                 |      |
| <b>Senior Member of Technical Staff</b>   | <a href="#">Carnegie Mellon</a> | 2020 |
| At SEI, collaborated with groups from AT&K, Intel and NREC supporting projects like AI, HCI, and HPC in C++ and Python              |                                 |      |
| <b>VP Engineering</b>   | <a href="#">Hire an Esquire</a> | 2014 |
| Led redesign, refactoring, and deployment of ground-up demolition of legacy Python, Django, Postgres web stack                      |                                 |      |
| <b>Senior Software Engineer</b>   | <a href="#">PPG</a>             | 2007 |
| Member of team building and shipping C++ code for Spectrophotometer used in 40,000 body shops                                       |                                 |      |
| <b>Contract Technical Consultant</b>  | <a href="#">Zenit Solutions</a> | 2008 |
| Designed and implemented python reporting system in web2py and postgresql to track movers via PostGIS and web2py                    |                                 |      |
| <b>Contract Technical Consultant</b>  | <a href="#">TenthRow</a>        | 2009 |
| Designed and built TenthRow - a web-based system to deliver a <a href="#">live music experience</a> via streaming to fans worldwide |                                 |      |
| <b>Contract Usability Consultant</b>  | <a href="#">MAYA Design</a>     | 2008 |
| Collaborated with MAYA Design human sciences group on Bayer Diabetes Blood Glucose Monitor  |                                 |      |

## Open Source

|  |                                      |      |
|--|--------------------------------------|------|
| <b>Unpaid Individual Technical Contributor</b>   | <a href="#">Github Issues Report</a> | 2017 |
| Coordinated code and configuration from the team at Rent Jungle                                    |                                      |      |
| <b>Unpaid Individual Technical Contributor</b>   | <a href="#">PostgREST</a>            | 2015 |
| Coded the python client to the server I built at Wellbridge Health prototyping the API             |                                      |      |
| <b>Unpaid Individual Technical Contributor</b>   | <a href="#">BodyTrace API</a>        | 2015 |
| Wrote the BodyTrace scale API, which we used at Wellbridge Health for remote healthcare management |                                      |      |
| <b>Unpaid Individual Technical Contributor</b>   | <a href="#">Marquee</a>              | 2003 |
| Contributed the servlet implementation to Marquee XML-RPC library                                  |                                      |      |

## Awards

|   |                       |      |
|---|-----------------------|------|
| <b>Infoworld Top 100 Award</b>                | humanservices.net     | 2006 |
| humanservices.net                             |                       |      |
| <b>Idea Foundry Transformation Fellowship</b> | Startup Angel Funding | 2003 |
| Cobind  |                       |      |

## Quotes From Coworkers

He's smart, dedicated and diligent but...

What impresses me most is his curiosity, critical thinking, and commitment to continued learning. 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, linux platform knowledge and insights into usability topped with his skills as a top-notch technical author makes him a great team member and collaborator.

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.

## Education and Learning

|  |                                |      |
|--|--------------------------------|------|
| <b>Duquesne University</b>             | Bachelor of Science            | 1991 |
| <b>MIT (Greenspun and Stonebraker)</b> | RDBMS and Internet Programming | 2012 |
| <b>Github</b>                          | Git Foundations Workshop       | 2012 |