david@davidwatson.org github linkedin stackoverflow

Summary & Skills

Help teams design, develop, and deploy software. Work has ranged from desktop to data center, mobile to cloud, startups to research labs. Comfortable working alone, in pairs, or small teams; private or shared office; hybrid or remote, home or coworking space. Began working remotely in 1999 - lived in Seattle, worked in Boston.

Operating Systems & Programming Languages

Productive working on Linux, MacOS, and Windows - since Unix-like, BSD and WSL2 are close enough, respectively.

Since 2005, worked mostly in Python, occasionally in C++ or Ruby. Prior to 2005 worked mostly in C++, occasionally in Perl, Python, or Ruby.

Containerization & Virtualization

Used containerization tools like Docker since 2015, Orchestration stacks like Kubernetes since 2017, and virtualization products like VMWare since 2000.

Databases & Methods

Used PostgreSQL since 2008 for its native support for structured and unstructured data and numerous extensions (Citus, PostGIS, JSONB) plus a wide variety of cloud deployments that make dev-prod parity straightforward.

Tailored agile based on a synthesis of research from Alistair Cockburn, Allen Holub, Bonnitta Roy, and Ron Westrum, where what matters is what works for the team, its culture and its unique idiosynchracies.

Experience

Software Engineering Specialist   Caterpillar   2018-2020, 2021

- Built, reviewed and profiled C++ code on Linux from Intel x86 to ARM FPGA for RC Terrain Visualization
- Guided company-wide directives on docker container usage for build engineering and CI/CD on Azure

Member of Technical Staff   Carnegie Mellon University   2020

- Contributed to Emerging Technology Center within Software Engineering Institute
- Worked on HPC, MLOps, and HCI in concert with National Robotics Engineering Center

Senior Software Developer   Realpage   2016 - 2018

- Led weekly retrospectives to improve cadence, velocity, and teamwork
- Implemented crawler data pipeline using Python, Django, PostgreSQL, Docker, and Kubernetes on AWS

VP Product Development   Wellbridge Health   2015 - 2016

- Led development team through HIPAA-compliant MVP with SPA UX design from MAYA
- Implemented REST API using Python/Django, DRF and PostgreSQL serving EmberJS SPA on Aptible

VP Engineering   Hire an Esquire   2014

- Led engineering team to redesign and simplify MVP
- Refactored Python, Django, and PostgreSQL stack with vanilla Django and Bootstrap frontend

Senior Software Developer   Forever   2013 - 2014

- Wrote Python, Flask, MongoDB proof-of-concept demonstrating photo sharing and storage on Heroku
- Productionized design using Ruby on Rails, PostgreSQL, AWS

Senior Engineer   BrainStorm   2011 - 2012

- Contributed python, postgreSQL code to internal systems supporting daily operations
- Designed and implemented conversational text systems (like twilio) and REST interfaces in python

Software Development Manager   Wellspring   2010 - 2011

- Led devops from legacy data center to SaaS VMWare deployment
- Built CI/CD systems using Capistrano (Ruby), Mechanize (Python), and Selenium

Project Engineer   Qinetiq   2008-2009

- Visualized XML sonar data in python, consumed by C++ GUI application on Windows
- Ported Microsoft C#.net Windows GUI to C++/Qt/Linux for OCU deployment

UI Software Engineer   Nomos   2006 - 2007

- Contributed C++ QA tests and code reviews to CORVUS FDA-regulated radiation oncology product
- Prototyped wireframes and rendered storyboards in C++/Qt for adaptive 4D treatment planning

Software Design Engineer   MAYA Design   2004 - 2006

- Built REST backends in python emitting JSON for consumption by proprietary AJAX frontends
- Implemented a Zigbee wireless lighting system in C# on Windows for Philips

Co-Founder   Cobind   2003 - 2004

- Partnered on ideation, vision, and execution of custom Linux Tools startup
- Received wide press acclaim around custom Linux products after winning Idea Foundry Fellowship

Senior Software Engineer   MSA   2000-2003

- Contributed code, data, and deployment before and after startup acquisition
- Implemented backend product import systems providing Excel VBA API from spreadsheet to database

Member of Technical Staff   CA   1995-2000

- Built C++ GUI for Legent (Automation Point) and Platinum (Raveler), before acquisition by CA
- Wrote C++ code for CA-Unicenter products after CA acquisition

Education

- Bachelor of Science   Concentration in Business, CS, and Music   Duquesne University   1991