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Summary

Prototype programmer using rapid R&D experiments to design, develop, and deploy complete, productized software.

Objective

Craft software with a team of caring, daring, reflective creatives sharing common [aesthetics](#), [methods](#), and [tools](#).

Knowledge and Skills

Platforms	Languages	Database	Private Cloud	Public Cloud
Linux	C/C++	Postgres	Docker	AWS
MacOS	HTML/CSS/JS	SQLite	Kubernetes	GCP
Windows	Python	Redis	Proxmox	Azure

Architecture	Integration (CI)	Deployment (CD)	Frameworks	Methods
API	Jenkins	Aptible	Django	Agile
HCI	Circle CI	Capistrano	Flask	Lean
Cloud Native	GitOps	Shippable	Rails	Sensemaking

Long-Term Experience

Software Engineering Specialist	Caterpillar	2018-2020
Designed storage system on Kubernetes; Worked with IT to make provisioning private cloud infrastructure feasible		
Senior Software Developer	Rent Jungle	2016-2018
Coded crawler data pipeline from Docker and Kubernetes on Linux & Mac to AWS in Python with Postgres & MySQL		
VP Product Development	Wellbridge Health	2015-2016
Led product development team from MVP to telehealth sensor system in Python, Flask, Django, Postgres, and Aptible		
Senior Software Developer	Forever	2013-2014
Prototyped MVP in Python, Flask, NoSQL; Ported system to Ruby/Rails/Postgres for production deployment on Heroku		
Senior Engineer	SMaSh	2011-2012
Built conversational text interface to track blood glucose for diabetes patients in Python, Flask, Postgres, and Heroku		
Software Development Manager	Wellspring	2010-2011
Transformed legacy ops from data center to automated CI/CD SaaS deployment cutting daily support to near zero		
Project Engineer	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 Software Engineer	Nomos	2006-2007
Automated QA tests in C++ for Corvus radiation oncology product; Prototyped adaptive 4D radiotherapy in C++/Qt		
Software Design Engineer	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 Software Engineer	Management Science Associates	2000-2003
Created VBA plugin enabling remote product import over SOAP protocol from Microsoft Excel to product database		
Principal Member of Technical Staff	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

Technical Consultant	Caterpillar	2021
Built and profiled terrain visualization C++ code ported from Intel to Xilinx ZCU-104		
Senior Member of Technical Staff	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 Software Engineer	PPG	2007
Member of team building and shipping C++ code for Spectrophotometer used in 40,000 body shops		
Technical Consultant	Zenit Solutions	2008
Designed and implemented python reporting system in web2py and postgresql to track movers via PostGIS and web2py		
Technical Consultant	TenthRow	2009
Designed and built TenthRow - a web-based system to deliver a live music experience via streaming to fans worldwide		
Usability Consultant	MAYA Design	2008
Colaborated with MAYA Design human sciences group on Bayer Diabetes Blood Glucose Monitor		

Open Source


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

Awards


Infoworld	Top 100 Award	2006
Design and delivery of DHS humanservices.net project at MAYA Design		
Idea Foundry	Transformation Fellowship	2003
Startup (Cobind) Seed Investment and Entrepreneurial Support		


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

Github	Git Foundations Workshop	2012
MIT (Greenspun and Stonebraker)	RDBMS and Internet Programming	2012
Duquesne University	Bachelor of Science	1991