David Watson

Complete Systems make Compelling Stories from Insight, Iteration, and Innovation into Prototype, Process, and Product

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Summary

A **computer science** award before music school vaulted me into a **computer programming** internship afterward. Designed data products, developed software from shrinkwrap to service, and deployed pipelines of DiY tools. Moved ideas to code, data to science, and markdown to markup documentation. *Realizing Empathy* remains key as users see GPT-LLM's go everywhere sans human-computer-sensemaking.

Experience

Wyvern   2023-2024

Technologist (1099)   Nashua, NH

- Roadmapped legacy code removal and sunsetting with Docker Compose, Kubernetes, and Typescript Stack

Freelance   2022

Software Design Engineer   Pittsburgh, PA

- Prototyped PKM with GPT and Requests by building corpus from crawled frontier; Experimented with Arch Linux, Rust, Polars;

Caterpillar   2021

Technical Consultant (1099)   Pittsburgh, PA

- Optimized ZCU-104 Terrain Visualization port using GCC flags to gain 30% performance boost quickly without deep tools or talent

Carnegie Mellon University (Emerging Technology Center (AI Division))   2020

Senior Member of Technical Staff   Pittsburgh, PA

- Artificial Intelligence (AI), Human Computer Interaction (HCI), High Performance Computing (HPC) using Agile, KubeFlow, MLPerf

Caterpillar   2018-2020

Software Engineering Specialist (W-2)   Pittsburgh, PA

- Assembled Sensor Storage for Edge Network on Kubernetes to achieve Dev-Prod Parity using S3 as **protocol not product**, like Minio
- Collaborated with IT execs on planning and implications of cloud native storage burden to declarative vs fixed configuration

Rent Jungle (RainMaker (RealPage))   2016-2018

Senior Software Engineer   Pittsburgh, PA

- Led weekly retro resulting in better communication, velocity, and teamwork via agile methods like affinity diagrams and pairs work
- Crafted Scrapy crawler (python 3) to cover real estate frontier without detection on Django, PostgreSQL, and Kubernetes

Wellbridge Health   2015-2016

VP Product Development, IT Compliance Officer   Pittsburgh, PA

- Deprecated legacy App Store dependency using browser-based Ember SPA MVP designed and delivered in concert with MAYA Design
- Developed API backend on Python 3 - Django REST Framework, PostgreSQL emitting JSON API to Ember SPA on Aptible

Forever   2013-2014

Senior Software Developer   Pittsburgh, PA

- Prototyped full-stack (Bootstrap to Heroku) on Proxmox-Gitlab quickly on Python 3 before porting MVP from Python to Ruby on Rails

- Enabled the company to capture strong market traction in just a year after releasing 1.0 e-commerce platform finished at Neo

SMaSh - Brainstorm SMS Technologies (Mind Matrix)   2011 - 2012

Senior Engineer   Pittsburgh, PA

- Wrote conversational text systems (like twilio) in Python, PostgreSQL, Flask, and Requests on Fedora Linux

- Supported large SMS text campaigns from Pittsburgh Steelers to Miller-Coors

Wellspring   2010-2011

Software Development Manager   Pittsburgh, PA

- Led Sophia and Flintbox teams from 1M SLOC data center to automated SaaS virtualization of CI/CD, DevOps, and SRE code culture

- Prototyped systems using Capistrano (Ruby), Mechanize (Python), and Selenium with team of 4-7 software engineers

Applied Perception (Foster Miller (Qinetiq))   2008-2009

Project Engineer   Pittsburgh, PA

- Visualized XML sonar data in Python Beautiful Soup server and Microsoft Visual C++ GUI client on Windows for UUV deployments

- Ported Microsoft C# Windows GUI application to C++, Qt, Ubuntu Linux for OCU deployment of Talon Robot in EOD applications

NOMOS (North American Scientific, Best Medical)   2006-2007

UI Software Engineer   Pittsburgh, PA

- Coded C++ QA tests, maintained Perl code review system, CORVUS FDA-regulated product, team of 12, ~2M SLOC Mac

- Prototyped wireframes and rendered storyboards in C++/PyQt for adaptive 4D treatment planning with team of 4

MAYA Design (BCG)   2004-2006

Software Design Engineer   Pittsburgh, PA

- Won award for python web services emitting JSON to JDA clients on team of 4 developing A+ Schools, 3RC, humanservices.net

- Demoed GUI lighting IoT Zigbee PoC in C#.net/COM/Visio on Windows for Phillips execs in 5 days sketch-to-code

Cobind   2003-2004

Cofounder   Pittsburgh, PA

- Designed DiY Linux Tools, YUMGUI, Desktop ISO with cofounder; Won worldwide press acclaim after Idea Foundry Fellowship GTM

Education

Duquesne University (Core in Computer Science, Music, Technical Writing)   BS-BA

Continuing Education   MIT Internet App Programming & RDBMS (Stonebraker)