

WYATT ALT

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ABOUT

Backend developer with specific interest in databases, storage, and query systems.

SKILLS

Concepts Relational databases, data modeling, statistical analysis, performance analysis, API design and development, developer tools, technical writing, configuration management, cloud infrastructure, open source community support.

Languages Go, Python, Clojure, Ruby, R, Typescript.

Technologies PostgreSQL, Linux, Docker, Kubernetes, Redis, GCP, AWS, Azure, Terraform, Puppet.

WORK

Software Engineer, *Foxglove Technologies Inc.*

May 2021 - Present

- Original designer of the [MCAP file format](#) and major contributor to associated tooling. MCAP is a serialization-agnostic log transport format gaining acceptance in the robotics industry for multimodal data logging. It has recently been adopted as the default log format for ROS 2. MCAP handles format aspects such as self-containment, chunk compression, indexed playback, integrity checks, client SDKs, and fast remote file summarization, while allowing the user to choose whatever message serialization technology they want.
- Working on Foxglove Data Platform, a SaaS or self-hosted solution for scalable storage, management, playback, and analysis of multimodal sensor logs.

Staff Software Engineer, *Cruise*

July 2020 - May 2021

Senior Software Engineer, *Cruise*

June 2018 - July 2020

- Designed, implemented, and operated some of the most heavily-trafficked internal applications in the company, serving thousands of requests per second and hundreds of terabytes per day in self-driving car sensor log playback.
- Built and administered multiple intensive PostgreSQL databases, ranging from hundreds of gigabytes to dozens of terabytes in size. Operational challenges included online table rewrites and partitioning, multixact member ID wraparound, bloat analysis and elimination, query performance analysis, connection pooling, load balancing, and tables with growth rates in the billions of records per day.
- Organized PostgreSQL trainings with 2ndQuadrant for interested engineers.
- Consulted on PostgreSQL for teams outside data infrastructure.
- Proposed and drove multiple cross-team projects to realize major savings in infrastructure costs through reduction of unnecessary data storage and underutilized databases.

Software Engineer, *Puppet*

June 2014 - December 2017

- Major contributor to [PuppetDB](#), an open-source datastore for Puppet backed by PostgreSQL. PuppetDB is used by tens of thousands of people around the world and assists in the management of millions of computer systems. Noteworthy components include a powerful custom query language and SQL compiler.
- Frequent technical representative to customers in support escalations, generally advising on PostgreSQL and PuppetDB performance.
- Contributed variously to most backend elements of Puppet Enterprise.

Statistical Programmer, *Maple Bay Asset Management LLC*

August 2013 - March 2014

- Designed, implemented, validated, and deployed investment models on lending platform Prosper.com.
- Contributed to investor portal. Flask, MongoDB, D3.js.

Research Assistant, *Renn-Jones Bioinformatics Lab, Reed College*

Summer 2011, Summer 2012

- Statistical analysis of microarray data for evidence of gene regulation by transcription factors in African cichlids.

EDUCATION

B.A. Mathematics *Reed College, Portland, OR.*

2013

OTHER

Undergraduate thesis *Enumeration of Domino Tilings on the Projective Grid Graph*

May 2013