

WYATT ALT

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ABOUT

Backend developer with good fundamentals in statistics and data analysis. Open source enthusiast. Work interests include challenges in data processing/throughput/storage/comprehension, distributed and/or P2P networks, devops and infrastructure automation, and social benefit. Open to chat about anything.

SKILLS

Concepts Relational databases and schema design, functional programming, statistical modeling, data analysis and representation, performance analysis, technical writing, customer support, automation and virtualization.

Languages Golang, Clojure, Python, R, Ruby

Technologies Linux, PostgreSQL, SQL, Docker, Kubernetes, Puppet, Git

WORK

Senior Software Engineer, *Cruise Automation*

June 2018 - Present

- Data infrastructure

Software Engineer, *Puppet*

June 2014 - December 2017

- Most recently worked on [Puppet Discovery](#), a Golang/Docker/Kubernetes-based tool for remote RAL-style interrogation of the infrastructure-wide resource graph. Puppet Discovery eases Puppet's brownfield deployment process by bringing attention to unmanaged resources and providing mechanisms to put those resources under Puppet management.
- Major contributor to [PuppetDB](#), a datastore for Puppet. PuppetDB uses Clojure and PostgreSQL and represents an audit record for historical infrastructure changes as well as a detailed and customizable representation of the current state of a Puppet infrastructure on which changes can be dynamically based. Principle challenges include efficient database architecture, high concurrency, distributivity and high availability, API and query language design.
- Worked at points on most of the backend Clojure services for Puppet Enterprise.
- Active in user support over IRC, Slack, and the mailing list.
- Frequent technical representative to customers in support escalations.

Statistical Programmer, *Maple Bay Asset Management LLC*

August 2013 - March 2014

- Designed and implemented a logistic regression-based investment model for application on peer-to-peer lending platform Prosper.com. Employed various validation techniques including MCMC, cross validation, recursive partitioning. Prototyped in R, implemented in Python, some simulation and backtesting pieces in Julia. Wrote whitepapers describing models for distribution to investment partners.
- Responsible for management and analysis of payment and loan application data from multiple P2P lending platforms.
- Produced ggplot2 graphics for investor/partner presentations in R.
- Contributed to investor portal. Flask backed by MongoDB with various visualizations in D3.js.
- Employment ended on sale of company to Aequis Capital Management.

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

Summer 2011, Summer 2012

- Analysis of microarray data for evidence of gene regulation by transcription factors in African cichlids.
- Developed tools in Python and R for detecting irregularities in microarray probes tentatively associated with common genes.
- Key concepts included Hidden Markov models, mixed effects modeling, data visualization, microarrays.

EDUCATION

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

Class of 2013

OTHER

Undergraduate thesis [Domino tilings on the projective grid](#).

May 2013

- A domino tiling on a graph is a set of edges that collectively touch each vertex exactly once.
- Closed-form expressions have been previously discovered for the number of domino tilings on the rectangular grid, Möbius strip, and Klein bottle. I explore two approaches to the problem on the projective plane grid graph and produce several original results along the way.

COMAP Mathematical Contest in Modeling 2013

- Applied finite difference methods and genetic algorithms to optimize brownie pan design for efficient packing and even cooking.