Gerhard van Andel

asynchronousgillz.github.io • AsynchronousGillz • gerhard-van-andel

Technical Proficiencies

python, go, c, c++, java, html5, css, javascript, flask, redis, rabbit-mq, docker, spark, matplotlib, numpy, sh, mksh, bash, perl, ansible, terraform, aws, boto3, jira, slack, elasticsearch

Experience

Digitalglobe/Maxar **Westminster, CO**

Staff DevOps Engineer *May 2017 - present*

- Develops platforms and tools which provide insights and observability into the availability, performance, and reliability of services. These platforms include production monitoring, capacity management, and incident detection. Including the automated recovery systems using log parsing and performance metrics analysis with integrations to Slack, Jira, Elasticsearch, and Pagerduty.
- Lead engineer on operational report system that collects information on metrics and number of tickets created by automated systems and people to provide feedback to the development organization for daily operation alignment. The report helps establish SLOs and SLIs that can be used throughout the organization to contribute to metrics based SLAs.
- Investigate, triage, and troubleshoot production problems with on-call support to 24x7 operational teams managing the satellite ground system. Increase visibility into the health of the system, ensure higher success rates, and decrease computational waste across multiple domains through design changes in service operational flows.
- Worked with management and development teams to move geospatial image processing systems running in a high performance computing environment from a locally managed data-center to a cloud based solution while meeting the demands of up-time, and processing capabilities and communicating cost impact. Provided real time metrics of system health, performance improvements, bottleneck detection, and cost with both a scalable and elastic design.

Colorado State University: Computer Science Department **Fort Collins, CO**

Undergraduate Research Assistant *October 2016 - May 2017*

Funded through the National Science Foundation Research Experiences for Undergraduates program (NSF REU). Configured and installed Apache Storm with the intent to design different fault tolerance schemes for stateless message processing on department machines to test a variety of different data and message.

Colorado State University **Fort Collins, CO**

Network Operation Assistant *August 2014 - May 2017*

Assisted in the monitoring and maintenance on an enterprise network, including troubleshooting TCP/UDP/IP connections for both wired and wireless connections. Created network topology maps of wired and wireless infrastructure across an infrastructure of 180 buildings and, assisted with telecom management by prototyping and designing low cost network monitoring using raspberry pi's and a distributed reporting system to show link status of end users to help correlate reported customer problems to device reporting.

Education

Colorado University (CU) **Boulder**

Masters of Science: Computer Science *Fall 2019 - Present*

Colorado State University (CSU) **Fort Collins**

Bachelors of Science: Applied Computing Technology, Minor in Business Administration *Fall 2014 - Spring 2017*

Coursework

CSU - CS455 - Distributed Systems: Concurrent programming, thread pools and safety, non-blocking I/O, scalable server design, distributed mutual exclusion, distributed graph algorithms, distributed objects.

- **Shortest Paths in a Network Overlay** - *Java* - Construct a logical overlay over a distributed set of nodes, and then computing shortest paths using Dijkstra's algorithm to route packets within the overlay.
- **Scalable Server Design** - *Java* - Using non-blocking I/O multiplexing to receive from 100's of clients to a single thread then process messages on a fixed sized thread pool.
- **Analytics of the US Census Dataset** - *Java* - Using Hadoop's MapReduce analyzed, parsed and processed 50GB of the 1990 US Census dataset to support knowledge extraction over demographic data from all fifty states.

Notes: Completed kessel run in less than 13 parsecs, rescued the crew of the Kobayashi Maru on my fourth attempt