Gerhard van Andel

[redacted], CO – USA

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Education

Colorado State University **Fort Collins**
Bachelors of Science: Applied Computing Technology, Minor in Business Administration *Fall 2014 - Spring 2017*

Technical Proficiencies

Languages: python, go, c, c++, java, html5, css, javascript, php

Frameworks: mapreduce, hadoop, hdfs, spark, storm, kafka, zookeeper

Scripting: sh, mksh, bash, perl, ansible, terraform

AWS: lambda, batch, beanstalk, ecs, ec2, s3

Documentaion: jira, confluence, lucidchart, visio, latex

Databases: mariadb, sqlite, postgress

Experience

Digitalglobe **Westminster, CO**
Staff Satellite Operations Engineer *May 2017 - present*

Designed and implemented software to operationally interface with over a hundred micro-services, for both automated and manual recovery, log parsing, and system integration with third party software and ticket systems. The use of the operational interface allowed for better on-call support to 24x7 operations teams managing the satellite ground system, across multiple domains, decreasing recovery time and increasing visibility into the system. Work to ensure core resiliency to help enhance service availability by re-attempting failed operations and ensuring higher success rates.

Designed and implemented operational data report system that collected information to feedback to the development organization for daily operation alignment. This information would include metrics on the previous days deploys, number of known issues happened and days that the issue has been relevant, and number of tickets created by automated systems and people.

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 across an enterprise network.

Create and design network maps of wired and wireless infrastructure. Across an infrastructure across 180 buildings and, assist with telecom management by prototype and design low cost network monitoring device used to solve problems.

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.

CSU - CS370 - Operating Systems: Inter Process Communications, Threads, CPU Scheduling, Process Synchronization, Memory Management, Virtual Memory, Virtualization, Mass Storage & Disk Scheduling

Wireless Packet Generator - *C* - Distributed mesh networking to generator and analyze network traffic for wireless load balancing.

SANS Holiday Hack Challenge: Participant (2015, 2016, 2017, 2018)

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