Gerhard van Andel

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Education

Colorado State University **Fort Collins**
Bachelors of Science: Applied Computing Technology, Minor in Business Administration *Fall 2014 - Spring 2017*
GPA: 3.4

Technical Proficiencies

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

Frameworks: MapReduce, Hadoop, HDFS, Spark, Storm, Kafka

Scripting: sh, mksh, Bash, Perl, Ansible

Virtualization: ESXi, VMware, VirtualBox, GNS3

Documentaion: Confluence, Lucidchart, Visio, Latex

Databases: MariaDB, RRD

Experience

Colorado State University: Computer Science Department **Fort Collins, CO**
Undergraduate Research Assistant *October 2016 - present*
Funded through the National Science Foundation Research Experiences for Undergraduates program (NSF REU).
Goal Design different fault tolerance schemes for stateless message processing with Apache Storm.
Process Configure and install Apache Storm cluster on department machine.
Testing Test a variety of message processing schemes using Apache Storm with different data environments.

Colorado State University **Fort Collins, CO**
Network Operation Assistant *August 2014 - present*
Assisted in the monitoring and maintenance across an enterprise network.
Linux Manage installations of Arch, Debian, CentOS, and FreeBSD.
Network Documentation Create and design network maps of wired and wireless infrastructure.
Equipment Managed inventory and assisted with installation and support of access points, switches, routers, and UPS.
Cabling and Infrastructure Assist with telecom management and infrastructure across 180 buildings.
Solution Design Prototype and design low cost network monitoring device used to solve problems.

Mountain Multi-Vision & Sound **Breckenridge, CO**
Automation Wizard *June 2010 - August 2014*
Integration of commercial control systems and home automation systems to allow seamless control of all aspects of technology.
Scripting Generated different configuration files needed for the proper execution.
Fault Tolerance Designed a system that will continue operating properly in event of failure.
Racks and Enclosures Desiged, built, and installed in commercial and home environments.

Coursework

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.

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.

CSAW CTF Competitor: Cyber Security Awareness Week Capture The Flag competitor (2014, 2015, 2016)

RMCCDC CTF Competitor: Rocky Mountain Collegiate Cyber Defense Competition (2015, 2016)

SANS Holiday Hack Challenge: Participant (2015, 2016)