Bharat Nallan Chakravarthy

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EMPLOYMENT

Software Engineering Intern Vail Systems Inc, Chicago Illinois

May - July 2017

- Implemented metrics exporters in Golang for fetching metrics from applications in real-time and pushing them to Prometheus for log aggregation and Grafana for visualization.
- Built a Go Restful API to handle and log kubernetes events and pushed notifications to the existing notification pipeline.
- Scaled the applications by setting up Kubernetes Clusters for container orchestration and deploying the applications on AWS in a containerized environment using Docker.
- I also set up Jenkins pipeline for version control, Continuous Integration and Continuous Delivery.

Linux Systems Admin (SA) University of Colorado Boulder

Nov 2016 - present

- Responsible for managing a cluster of servers that are used for log aggregation and secure monitoring of the network traffic on the campus.
- Administered these servers with Bash scripting, Python and basic automation via Salt stack.

Software Engineering Intern

RSAE Labs, Panama City, FL

May - Aug 2016

- Developed an IoT monitoring system that pushes sensor data to AWS using Python (Flask framework) and Bash.
- Contributed to the migration of their bare-metal infrastructure to Amazon Web Services.
- Successfully ported their C++ based wireless mesh application from Windows to Linux.

EDUCATION

University of Colorado Boulder Masters in Electrical and Computer Engineering CGPA: 3.444 Dec 2017
SRM University Chennai Bachelors in Mechatronics CGPA: 3.71 May 2015

Relevant Courses: Object Oriented Analysis and Design, Advanced Network Systems, Secure Web Programming, Advanced Computer Architecture, Secure Embedded Systems.

SKILLS

Languages: Python, Java, Go, Bash

Technologies: Docker, Kubernetes, Ansible, Prometheus, Grafana, AWS, Vagrant, Redis, MySQL, Jenkins Cl, Flask, Django,

Bootstrap, HTML, CSS

PROJECT EXPERIENCE

Client Side Load Balancer Worked on a Java-based client side load balancer that distributes HTTP requests across various servers from the client. Designing a low-latency, fault-tolerant load balancer that intelligently add/removes servers from the service pool.

Website uptime monitoring Worked on a Python-based command line tool that would allow users to constantly monitor a host for down time. The tool will also alert the user when a down time occurs. Redis is used for persistence.

GPU vs CPU metrics analysis of a Convolutional Neural Network Trained CNNs on AWS GPU instance using Caffe framework for traffic sign recognition. Tested the machine learning model against the various CPU and GPU metrics for evaluating the Classification Times vs Accuracy of the trained model on NVIDIA Jetson TX1.

Activity assistant Django application that allows users to manage appointments, keep track of expenses, add notes and set reminders. Achieved good code reusability and organisation by using various design patterns such as MVC, Command, Momento, Strategy and Facade. Python, Django, SQL, HTML, CSS, Bootstrap.