

# Brian Greenberg

SOFTWARE ENGINEER

☎ (858)-224-3489 | ✉ bsgreenb@eng.ucsd.edu | 📷 bgreenb | 📱 bgreenb

## Work Experience

### Teradata

ASSOCIATE SOFTWARE ENGINEER

San Diego, CA

Feb. 2019 - October 2020

- Core Developer for Stacki, an **Open Source** baremetal provisioning tool for **Linux** written in **Python**
- Enabled a consistent, reproducible, and automated deployment/upgrade of customer and internal systems
- Worked with **Jenkins** to create CI/CD pipelines for testing and delivering new software
- Used **Ansible** to automate deployments of various teams applications
- Provided extensive technical support to internal users and customers when upgrading systems
- Leveraged **KVM** for automated provisioning of Virtual Machines (VM) on Linux systems
- Created a library on top of the **Libvirt** api to generate VM configuration files
- Wrote a suite of commands in existing framework to manage storage, networking, cpu, and memory settings of VMs
- Built relational database tables in **MySQL** to store VM configuration data
- Automated a previously manual process of setting up VMs on new customer systems
- Created a plugin based tool in Python for validating yaml configuration files on new systems

### University of California, San Diego

APPLICATION PROGRAMMER

San Diego, CA

July. 2017 - Nov. 2018

- Created a **Flask** based web application for tracking fleets of Raspberry Pi's with **SQLite** and SQLAlchemy
- Worked on research project to create a **Python** based network firewall appliance
- Emulated a dedicated hardware firewall appliance using software and commodity hardware
- Utilized **Software Defined Networking** to implement firewall rules on network switch
- Implemented plugin functionality for custom firewall rule matching

### University of California, San Diego

UNDERGRAD RESEARCH ASSISTANT

San Diego, CA

June. 2015 - June. 2017

- Redo display wall cluster for Professor by building a small cluster to power displays
- Package and deploy display wall software to cluster in an automated and reproducible fashion
- Configure networking and storage on **RedHat Linux** for cluster

## Skills

**Programming** Python, Java, Ocaml, C/C++

**Tools/Technologies** Ansible, Artifactory, Bash, Docker, Git, Jenkins, MySQL, Redhat Enterprise Linux, SUSE Linux

**Environments** Linux, MacOS, Windows

## Education

### B.S. in Computer Science

UNIVERSITY OF CALIFORNIA, SAN DIEGO

San Diego, CA

2014 - 2017

#### Relevant Coursework—

- Data Structures, Algorithms, Operating Systems, Networking, Compilers

## Projects

### Personal Website

FULL STACK WEB DEVELOPMENT (IN PROGRESS)

- Use React, Javascript, NodeJS, and other web technologies to create a personal website

### Virtual Machine GPU Passthrough

SYSTEM ADMIN

- Using **KVM**, **QEMU**, and **Libvirt**, made a Windows virtual machine running on a **Linux** system that has full 3D graphics acceleration.
- Used huge pages to increase VM cache performance and isolated guest graphics using kernel flags

## Fun Stuff

- Prototyped a **GraphQL** based api for team's product in company hackathon
- Board member of UC San Diego's Computer Science Security Club last year of attendance