

Ryan Drew

LEARN · BUILD · CONTRIBUTE

Greater Denver Area, Colorado

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Computer science undergraduate seeking an opportunity to further learn and gain work experience within the realms of CyberSecurity and DevOPs through a paid or unpaid internship during the Summer of 2021.

Education

University of Colorado at Boulder

Boulder, Colorado

B.S. IN COMPUTER SCIENCE (3.8 GPA)

Junior, Graduating 2022

- Pursuing B.S. in Computer Science with a minor in Engineering Management.
- Member of Engineering Honors Program (EHP), Engineering Leadership Program (ELP) and mentee within the Boulder-CU Leadership Program (BCLP).
- Achieved proficiency in wide range of fundamental technical and soft skills: Linux administration, operating system design, programming fundamentals in Python, Scala and C/C++, object-orientated programming (OOP), ethical hacking, project leadership, teamwork, written/oral communication and time management.
- Environment fosters self-starter attitude and high capacity for independent study.

Skills

Languages	Python, Scala, C/C++, Bash, Brainfuck, YAML, Markdown, LaTeX
VM/Container Platforms	Docker/Podman, OpenStack, KVM, Kubernetes, Heroku, Google Compute
Automation Tools	Ansible, Kolla-Ansible, The Foreman, PXE Boot, Kickstart
Network Administration	PfSense firewall, Cisco IOS switch, OpenVPN
BlueTeam Security Tools	FreelIPA (OpenLDAP, Kerberos), Let's Encrypt, Elastic Stack

Experience

Earth Treks Climbing and Fitness

Golden, Colorado

PART-TIME INSTRUCTOR

Fall 2019 - Present

- Lead weekly youth programming classes and events that center around building self-confidence, proper warm-up and climbing technique, verbal communication skills and safety while climbing within the gym.
- Responsible for confronting, de-escalating and educating members violating safety policies, whether it be unruly children or adults using dangerous belay methods.
- Trusted with performing lead belay checks, top rope belay checks and routine floor walks to ensure high safety standards and engage with members to build a welcoming community environment.

Zayo

Boulder, Colorado

CYBER SECURITY ANALYST I

Summer 2019

- Performed cost to functionality analysis in migrating corporate SIEM solution to open source architecture, which involved researching growth requirements, opex and capex costs and use cases and then communicating findings to CSO.
- Combed through ISO 27001 information security policy documents before their release to employees, looking for typos and asking questions targeted towards learning the ins and outs of the company's security posture.
- Took charge of designing, deploying and administering proof-of-concept Elastic Stack for hands-on evaluation of SIEM capabilities with company firewall data, ease-of-use and resource requirements.
- Contributed to the five-year corporate security roadmap by providing ideas sourced from independent research and by participating in think-tank discussion.

CU Boulder's Integrated Teaching & Learning Program and Laboratory (ITLL)

Boulder, Colorado

IT STUDENT ASSISTANT I

Fall 2018 - Spring 2019

- Part of a team responsible for supporting new required student hardware by adding the necessary drivers into Microsoft Deployment Toolkit and Windows Deployment Services.
- Led a student team in the overhaul of cable management standards in four student work areas to deter theft of assets, increase student productivity and create a clean public image for the IT team.
- Communicated with students and conferred with peers in order to troubleshoot and fix issues impacting use of student software.
- Assisted in the on-boarding process for new student staff, thereby allowing full-time staff to focus on more pressing projects.

Lockheed Martin

Littleton, Colorado

GOES IT INTERN

Spring 2018

- Gained hands on experience with OpenScap OVAL and Synk.io to develop a baseline knowledge of approaches to risk assessment.
- Researched the security regulation ecosystem, gaining a fundamental understanding of industry practices and NIST 800-53 standards.
- Collaboratively developed a Python script to automate ticket creation from system monitoring alerts, in an effort to streamline the debugging process during the failure of internal servers and services.
- Prepared a 15-minute presentation that summarized internship experience and presented to all other interns, employee representatives from their teams and management.

Level 3 Communications (Now CenturyLink)

Broomfield, Colorado

THREAT RESEARCH GROUP SUMMER INTERN

Summer 2016 and 2017

- Independently proposed and developed a Python module to pull Indicators of Compromise (IOCs) from Honey Pot Bots tweeting their compromises to Twitter and export them to team's internal threat analysis infrastructure in real time.
- Containerized the above Python module into a Docker image and received approval from management to deploy it into team's production Docker Swarm environment.
- Lead implementation and development of application comprised of Redis, Saltstack and Python capable of managing hundreds of SSH proxies to cloud instances, for use in protecting company assets by anonymizing large-scale Internet threat research.
- Set the standard for Python code documentation within the team through exemplification of a personal high standard of clarity, consistency and coverage, and through implementation of automatically generated documentation sites built from source code.

Extracurricular Activity

On-Prem Private Cloud

My Laundry Room

HOME DEVELOPMENT LAB

Fall 2018 - Present

- Operate a custom three-node OpenStack cluster built on Docker containers through the use of the Kolla-Ansible deployment project, complete with Software Defined Networking (SDN), Infrastructure as Code orchestration capabilities, DNS as a Service (DNSaaS), Load Balancer as a Service (LBaaS), Infrastructure as a Service (IaaS), Storage as a Service (SaaS) and Container as a Service (CaaS).
- Centralized user authorization, authentication and Host Based Access Control (HBAC) policies, allowing for scalable and secure permissions management within the environment on any compatible application.
- Automated bare-metal and cloud provisioning process of linux servers, streamlining the idea to implementation pipeline and reducing dependency of performing repetitive tasks by-hand.
- Administer network firewall and layer-two Cisco switch to manage network segmentation and allowed/denied network traffic, securing the environment against malicious bad-guys on the Internet.
- Employ authoritative DNS, allowing support for industry-recognized Let's Encrypt TLS certificates to secure http-based applications.
- Combined Canonical's Metal as a Service (MaaS) and JuJu project to fully automate the deployment of an OpenStack cluster on top of KVM-based virtual machines.
- Implemented Puppet's Kuberentes modules to fully automate the deployment of a three-node Kubernetes cluster on bare-metal.
- Setup support for cloud-native volumes within Kubernetes through the use of Helm charts and the Rook.io project, providing scalable and redundant storage for containers.
- Installed and configured a private JupyterHub instance, providing fast, reliable and centralized location for all school-based programming and note-taking needs.

CU Boulder Complex Leadership Challenges (COEN 3050) Global Intensive

Uganda and Rwanda

STUDY ABROAD

May 2019

- Met with organizations Thread of Life, Reach a Hand, Design Hub and Gahaya Links to learn their history, goals and methods for social impact.
- Toured the Kigali Genocide Memorial and Nyamata Church Memorial in Rwanda to listen to and understand the stories of those impacted by the genocide against the Tutsi.
- Stayed at Global Living Institute's (GLI) Entusi resort at Lake Bunyonyi, participating in local events such as swimming lessons and dance lessons, as well as listening to and learning from the people local to the area such as residents and the local traditional healer.
- Visited Makerere University and Kabale University to gain exposure to engineering student life within a different cultural setting.

CU Boulder Engineers Without Borders Puerto Rico

Boulder, Colorado

SECRETARY

Fall 2018 - Spring 2019

- Responsible for representing the team when responding to emails from new potential student members as well as outreach from organizations.
- Acted as historical archivist, documenting team discussions and decisions during weekly meetings.
- Investigated complex global health and engineering problems impacting developing countries around the world in order to brainstorm and research new team projects.

CU Boulder Climbing Team

Colorado

TEAM MEMBER

Fall 2018 - Fall 2019

- Professionally competed in Collegiate USA Climbing (USAC) competitions throughout Colorado, participating in 10+ hours of team and individual practice per week.
- Embodied the idea of 'ambition without competition', supporting team culture of rigorous self-improvement while remaining humble and sportsman-like towards others.
- Represented the CU Boulder Climbing Team both on and off the wall, communicating core values of acceptance, growth and fun to potential new members and the climbing community.
- Researched and practiced proper training techniques to help prevent and recover from personal injuries and streamline physical progress.