SANTIAGO ESPINOSA MOOSER

👤 ABOUT

I am a final year Computer Science student at the University of Hong Kong with a passion for Cyber Security. Over the last few years, I have had internships in various cybersecurity-related roles, including DevOps, Penetration Testing, DevSecOps, and Operational Cyber Security. I generally enjoy being a team player and sharing ideas with my colleagues, and I appreciate any feedback and constructive criticism. I am currently looking for a Graduate Cyber Security role in a fast paced and energetic environment, hopefully in Hong Kong or Europe.

💼 WORK EXPERIENCE

Hex Trust   Hong Kong
🌐 https://hextrust.com   Jun 2022 – Present

Hex Trust is a fully-licensed and insured provider of bank-grade custody for digital assets with a focus on security and compliance.

Consultant (DevSecOps & SecOps)

Focused on the 'Build' initiatives and 'Shift Left' approach by delivering several projects within DevSecOps, Application Security, Security Automation and Cyber Defense.

Highlights

Worked with senior management including CISO, Head of Platform and Head of Cybersecurity on the first-ever DevSecOps pipeline in the company by researching industry-standard tools. Designed, tested and finalized the pipelines in different environments to balance security requirements and efficiency of code deployment.

Automated the implementation of smartcard encryption and the provisioning of Ubuntu-based company laptops through the use of bash scripting. Provisioning time reduced by more than 90%.

Responded to critical security incidents by investigating logs and alerts on the company's SIEM and WAF systems. Researched and advised on recommended response to the Head of Cybersecurity.

Worked with Head of Cybersecurity to test and evaluate next-gen WAF/RASP and automated pentesting tools.

Handshake Networking   Hong Kong
🌐 https://handshake.hk   May 2020 – Jan 2022

Handshake Networking is a boutique cybersecurity consultancy company that specializes in penetration testing and application security testing.

Pentester, Software Developer, DevOps Engineer (full-time/part-time consultant)

Worked in various roles due to the small size of the company: Pentesting, Automation Engineering, Web Development, System Engineering.

Highlights

Independently designed, developed and deployed python-based Django backend API. The API was use to automatically scan vessels around the world with the use of remote scanners that communicated through RabbitMQ queues and asynchronous celery tasks.

Developed and deployed full DevSecOps pipeline and unit tests on self-hosted GitLab for the API project to speed up the development process.

Installed, managed and maintained company servers and VMs to enable the deployment and use of internally-used services, such as Bookstack, Samba and Elasticsearch.

Compiled a database of publicly-available leaked credentials to enhance the quality of pentests by improving our chances of brute-forcing client passwords. The Elasticsearch-based database contained over 4.2 billion records.

Assisted in the recertification of the company for the Authorized Scanning Vendor PCI certificate by scripting and automating reconnaissance and reporting stages.

Deployed various docker-based services for internal use, such as Bookstack (an internal wiki), GitLab and an Ubuntu-based Samba server.

Developed internal automation tools & web applications for internal use such as an ike-scan and nmap multithreaded wrapper (see github)

PricewaterhouseCoopers New Ventures   Hong Kong
🌐 https://www.pwchk.com/en/services/new-ventures.html   May 2019 – Dec 2019

PWC New Ventures builds software solutions for PWC's client base.

#### DevOps Intern (Full-time), DevOps Engineer Apprentice (Part-time)

Worked in the DevOps team to automate the provisioning of company servers and services.

Highlights

Worked with the head of DevOps to automate server deployments and provisionings using Ansible and Terraform. This reduced deployment and provisioning time from 3-5 business days to 30-45 minutes.

Wrote and maintained Ansible-based playbook to deploy internal communication tools instance (Mattermost). This deployment used docker-compose and Bash.

Troubleshooted certificate issues on docker-based deployments through the use of tools such as docker-compose, lazydocker and certbot.

⑂ PROJECTS

📋 **DevSecOps pipeline**:
Implemented DAST, SAST, and secure stages for NodeJS projects to improve the stage at which developers discover security vulnerabilities. Each environment pipeline was also adapted to the corresponding development environment, with Alpha having the lowest controls but highest execution speed and production having the most stringent and thorough controls. The tools used were Snyk, Zap Scanner, tfsec, hadolint, JSLint, Sonarqube and Sigstore.

📋 **Ansible-based automation for server provisioning**:
Developed various ansible playbooks for provisioning PWC's servers by leveraging Ansible, Jinja2 and Bash scripting. The automation of this process reduced provisioning time from 4-5 business days to 30-45 minutes.

📋 **Django-based network scanner API**:
Designed, developed and deployed django-based API. The API designed is to scan vessels connected to satelite and 4G networks by using asynchronous, pluggable 'scan engines' that communicate through rabbitMQ queues as the project required ships to be scanned from the scanner which is geographically closest to the target vessel.

🎓 **Django-based covid tracker dashboard**:
Developed a Django-based dashboard that displayed covid statistics for a software engineering course in HKU. The dashboard interacted with various third-party APIs to retrieve daily stats and display them after processing the data in the backend. The project was developed using Jira and Github in an Agile fashion.

🎓 **Haskell-based interpreter**:
Developed a Haskell-based interpreter for a custom programming language as the final project for the Principles of Programming Languages Course. This project required understanding the different principles of programming languages, such as First-class Functions, Variable Scoping, Mondads and Mutable States in order to build an interpreter that was able to implement these features. See https://github.com/santiago-mooser/haskell-based-interpreter.git

🖥 **Computer Science Association Virtual Career Week 2022**:
Organized and spearheaded the 2022 virtual career week event for the Computer Science Association. Involved six speakers from various role, including: Site Reliability Engineer, IT Governance Risk and Compliance Officer, and Software Engineer. Also served as host for three different fireside talks.

🖥 **Unraid Self-hosted Media Server**:
Deployed an unraid-based server that serves both as a media server and a personal backup for all my data. This server also hosts various docker-based services, such as PhotoPrism and Syncthing. I often use this server to experiment with new tools such as syncthing, nextdns.io, rclone and syncthing.

◎ CONTACT

📍 **Hong Kong**

✉ **contact@santiago-mooser.com**

🐙 **GitHub**
santiago-mooser

in **LinkedIn**
santiago-mooser

🔑 **Keybase**
santiagoespinosa

🏛 EDUCATION

University of Hong Kong
🌐 https://hku.hk/

Bachelor

Computer Science

2018 - 2023

Courses

Cryptography
Design And Analysis of Algorithms
Algorithmic Game Theory
Principles of Operating Systems

☰ SKILLS

Scripting / Automation
`Bash` `Python` `Shell` `Linux`

DevSecOps & SRE
`Kubernetes` `Helm` `DAST` `SAST` `Ansible` `Terraform` `Docker` `CIS` `Snyk` `tfsec` `kube-bench`

Linux/Unix systems
`Ubuntu` `Arch` `Bash` `Systemd` `Troubleshooting`

System Administration
`XCP-ng` `Ansible` `Azure` `AWS` `Linode` `Digital Ocean`

Pentesting
`reconnaissance` `Network scanning` `nmap` `ike-scan` `Burp suite` `Zap scan`

Web development
`Django` `API` `RabbitMQ` `Celery` `Queues` `MySQL`

🈂 LANGUAGES

English	Native
Spanish	Native
German	Proficient
Cantonese	Rudimentary

♥ INTERESTS

Playing the Bass

Muay Thai, MMA and Running

Co-op Videogames

Cybersecurity and Ethical Hacking

Privacy

Self-hosting

✅ REFERENCES

Santiago's rich experience in DevOps and Information Security allowed us to complete the design and implementation of our DevSecOps pipeline in a matter of weeks rather than months.
— Shane Read (Hex Trust) - Chief Information Security Officer

Santiago was always willing to offer his assistance and had excellent technical skills on working software products.
— Kit Ho (PWC) - Head of DevOps

— Richard Stagg (Handshake Networking) - Director and Managing Consultant