

# Irvin Lim Wei Quan

B.Comp., Computer Science (Year 4), National University of Singapore

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## SUMMARY

I am a passionate computer science student and software engineer, with more than 5 years of full-time internship and part-time experience.

Having started programming when I was 10 years old, my interests have always been centred around building, automating, securing and hacking web systems. Today, I am passionate about building reliable and efficient distributed systems.

My primary languages include Python and Go. On the side, I also like to dabble in capture the flag (CTF) wargames, get paid while taking part in bug bounty programs, and build tools to automate various tasks in my life.

In my free time, I enjoy listening to jazz, as well as playing bass with my school's jazz band.

## SKILLS

### Programming Languages

C, Go, Haskell, JavaScript, Java, Lua, PHP, Python, R, Ruby, Shell, Swift

### Software Development

React/Redux, Vue.js, Bootstrap; Electron, React Native, iOS (Swift); Laravel, Express, Koa, Django

### DevOps, Systems Administration

Apache httpd, NGINX, Traefik, OpenResty, Docker, AWS, Apache Mesos, DC/OS Marathon, GitLab CI, Travis CI, Jenkins, Ansible, Rundeck, CoreDNS, Apache ZooKeeper, Prometheus

### Data Layer

MySQL, PostgreSQL, Redis, Elasticsearch, Apache Kafka

## RELEVANT EXPERIENCE

- May 2018 – Oct 2018 **Shopee**  
Software Engineering Intern, Platform Engineering Group (PEG)
- Migrated and rewrote Shopee's email gateway which processes up to 4 million emails a day, to support exactly-once semantics, load balanced consumer groups and high availability on Apache Kafka
  - Developed a cronjob container scheduler on Apache Mesos, designed to be highly available with leader election, integrated with Rundeck
  - Designed and developed a service-based container orchestrator, supporting modular deployment strategies, intended to manage over 300,000 containers across all deployed services in the future
  - Helped respond to live operational incidents, such as during 9.9 *Super Shopping Day* (one of Shopee's largest yearly promotional events)
- May 2017 – Nov 2017 **Banff Cyber Technologies**  
Associate Web Security Developer, Internship
- Spearheaded development and architecture of *WebOrion Business SaaS*, a cloud-based multi-tenant web application firewall service
  - Implemented auto-scaling of immutable servers on AWS, allowing the service to scale up within 90 seconds during traffic surge events
  - Developed log collection pipelines for aggregating WAF incident logs, viewable within 60 seconds of any incident occurring worldwide
  - Developed a framework for profiling commercial WAFs against 250 automated penetration test cases
- Dec 2016 – Apr 2017 **Geektronics Solutions**  
Full-stack Web Developer, Freelance
- Developed the backend system for a point-of-sales system deployed in 150 F&B outlets across Singapore, developing the administrative user interface in React and REST API in Koa.js
- Mar 2015 – Jul 2015 **E8 Pte Ltd**  
Full-stack Web Developer, Freelance
- Developed a document management system in PHP similar to Google Drive, including unique features such as discretionary access control, version control, metadata tagging and LDAP authentication
- Jan 2013 – Apr 2013 **Tickled Media**  
WordPress Developer, Freelance
- Provided ad-hoc technical support, implemented features, performed page load optimisation and SEO for two WordPress websites

## EDUCATION

- Aug 2015 – Present **National University of Singapore**  
Bachelor of Computing (Honours) in Computer Science  
Concurrent Degree Programme with Brown University in Computer Science  
*Cumulative Average Point (CAP): 4.62 (out of 5)*

## AWARDS AND SCHOLARSHIPS

- May 2018 **Dean's List – AY 2017/18 Semester 2**  
National University of Singapore
- Feb 2017 **2<sup>nd</sup> Place – IDEa\$ Competition 2017**  
Engineering Design and Innovation Centre, Faculty of Engineering, NUS
- Aug 2015 **National Infocomm Scholarship**  
Info-communications Media Development Authority of Singapore (IMDA)