

Ryan Johnson

DATA SCIENTIST · ANALYTICS

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Education

POSTECH(Pohang University of Science and Technology)

B.S. IN COMPUTER SCIENCE AND ENGINEERING

- Got a Chun Shin-Il Scholarship which is given to promising students in CSE Dept.

Pohang, S.Korea

Mar. 2010 - Aug. 2017

Skills

DevOps	AWS, Docker, Kubernetes, Rancher, Vagrant, Packer, Terraform, Jenkins, CircleCI
Back-end	Koa, Express, Django, REST API
Front-end	Hugo, Redux, React, HTML5, LESS, SASS
Programming	Node.js, Python, JAVA, OCaml, LaTeX
Languages	Korean, English, Japanese

Experience

Omnious. Co., Ltd.

SOFTWARE ARCHITECT

- Provisioned an easily manageable hybrid infrastructure(Amazon AWS + On-premise) utilizing IaC(Infrastructure as Code) tools like Ansible, Packer and Terraform.
- Built fully automated CI/CD pipelines on CircleCI for containerized applications using Docker, AWS ECR and Rancher.
- Designed an overall service architecture and pipelines of the Machine Learning based Fashion Tagging API SaaS product with the micro-services architecture.
- Implemented several API microservices in Node.js Koa and in the serverless AWS Lambda functions.
- Deployed a centralized logging environment(ELK, Filebeat, CloudWatch, S3) which gather log data from docker containers and AWS resources.
- Deployed a centralized monitoring environment(Grafana, InfluxDB, CollectD) which gather system metrics as well as docker run-time metrics.

Seoul, S.Korea

Jun. 2017 - May. 2018

PLAT Corp.

CO-FOUNDER & SOFTWARE ENGINEER

- Implemented RESTful API server for car rental booking application(CARPLAT in Google Play).
- Built and deployed overall service infrastructure utilizing Docker container, CircleCI, and several AWS stack(Including EC2, ECS, Route 53, S3, CloudFront, RDS, ElastiCache, IAM), focusing on high-availability, fault tolerance, and auto-scaling.
- Developed an easy-to-use Payment module which connects to major PG(Payment Gateway) companies in Korea.

Seoul, S.Korea

Jan. 2016 - Jun. 2017

Undergraduate Research, Machine Learning Lab(Prof. Seungjin Choi)

RESEARCHER

- Researched classification algorithms(SVM, CNN) to improve accuracy of human exercise recognition with wearable device.
- Developed two TIZEN applications to collect sample data set and to recognize user exercise on SAMSUNG Gear S.

Pohang, S.Korea

Mar. 2016 - Exp. Jun. 2017

R.O.K Cyber Command, MND

SOFTWARE ENGINEER & SECURITY RESEARCHER (COMPULSORY MILITARY SERVICE)

- Lead engineer on agent-less backtracking system that can discover client device's fingerprint(including public and private IP) independently of the Proxy, VPN and NAT.
- Implemented a distributed web stress test tool with high anonymity.
- Implemented a military cooperation system which is web based real time messenger in Scala on Lift.

Seoul, S.Korea

Aug. 2014 - Apr. 2016

NEXON

GAME DEVELOPER INTERN AT GLOBAL INTERNSHIP PROGRAM

- Developed in Cocos2d-x an action puzzle game(Dragon Buster) targeting U.S. market.
- Implemented API server which is communicating with game client and In-App Store, along with two other team members who wrote the game logic and designed game graphics.
- Won the 2nd prize in final evaluation.

Seoul, S.Korea & LA, U.S.A

Jan. 2013 - Feb. 2013

Undergraduate Research, Computer Vision Lab(Prof. Bohyung Han)

RESEARCHER FOR <DETECTING VIDEO'S TORRENTS USING IMAGE SIMILARITY ALGORITHMS>

- Researched means of retrieving a corresponding video based on image contents using image similarity algorithm.
- Implemented prototype that users can obtain torrent magnet links of corresponding video relevant to an image on web site.

Pohang, S.Korea

Sep. 2012 - Feb. 2013

Software Maestro (funded by Korea Ministry of Knowledge and Economy)

SOFTWARE ENGINEER TRAINEE

- Performed research memory management strategies of OS and implemented in Python an interactive simulator for Linux kernel memory management.

Seoul, S.Korea

Jul. 2012 - Jun. 2013

ShitOne Corp.

SOFTWARE ENGINEER

- Developed a proxy drive smartphone application which connects proxy driver and customer. Implemented overall Android application logic and wrote API server for community service, along with lead engineer who designed bidding protocol on raw socket and implemented API server for bidding.

Seoul, S.Korea

Dec. 2011 - Feb. 2012

SAMSUNG Electronics

FREELANCE PENETRATION TESTER

- Conducted penetration testing on SAMSUNG KNOX, which is solution for enterprise mobile security.
- Conducted penetration testing on SAMSUNG Smart TV.

S.Korea

Sep. 2013, Mar. 2011 - Oct. 2011

Extracurricular Activity

B10S (B1t On the Security, Underground hacker team)

S.Korea

CORE MEMBER

Nov. 2011 - PRESENT

- Gained expertise in penetration testing areas, especially targeted on web application and software.
- Participated on a lot of hacking competition and won a good award.
- Held several hacking competitions non-profit, just for fun.

WiseGuys (Hacking & Security research group)

S.Korea

MEMBER

Jun. 2012 - PRESENT

- Gained expertise in hardware hacking areas from penetration testing on several devices including wireless router, smartphone, CCTV and set-top box.
- Trained wannabe hacker about hacking technique from basic to advanced and ethics for white hackers by hosting annual Hacking Camp.

PoApper (Developers' Network of POSTECH)

Pohang, S.Korea

CORE MEMBER & PRESIDENT AT 2013

Jun. 2010 - Jun. 2017

- Reformed the society focusing on software engineering and building network on and off campus.
- Proposed various marketing and network activities to raise awareness.

PLUS (Laboratory for UNIX Security in POSTECH)

Pohang, S.Korea

MEMBER

Sep. 2010 - Oct. 2011

- Gained expertise in hacking & security areas, especially about internal of operating system based on UNIX and several exploit techniques.
- Participated on several hacking competition and won a good award.
- Conducted periodic security checks on overall IT system as a member of POSTECH CERT.
- Conducted penetration testing commissioned by national agency and corporation.

MSSA (Management Strategy Club of POSTECH)

Pohang, S.Korea

MEMBER

Sep. 2013 - Jun. 2017

- Gained knowledge about several business field like Management, Strategy, Financial and marketing from group study.
- Gained expertise in business strategy areas and insight for various industry from weekly industry analysis session.

Honors & Awards

INTERNATIONAL

2018	Finalist DEFCON 26th CTF Hacking Competition World Final	Las Vegas, U.S.A
2017	Finalist DEFCON 25th CTF Hacking Competition World Final	Las Vegas, U.S.A
2014	Finalist DEFCON 22nd CTF Hacking Competition World Final	Las Vegas, U.S.A
2013	Finalist DEFCON 21st CTF Hacking Competition World Final	Las Vegas, U.S.A
2011	Finalist DEFCON 19th CTF Hacking Competition World Final	Las Vegas, U.S.A
2012	6th Place SECUINSIDE Hacking Competition World Final	Seoul, S.Korea

DOMESTIC

2015	3rd Place WITHCON Hacking Competition Final	Seoul, S.Korea
2017	Silver Prize KISA HDCON Hacking Competition Final	Seoul, S.Korea
2013	Silver Prize KISA HDCON Hacking Competition Final	Seoul, S.Korea
2013	2nd Award HUST Hacking Festival	S.Korea
2010	3rd Award HUST Hacking Festival	S.Korea
2012	3rd Award Holyshield 3rd Hacking Festival	S.Korea
2011	2nd Award Holyshield 3rd Hacking Festival	S.Korea
2011	5th Place PADOCON Hacking Competition Final	Seoul, S.Korea

Presentation

DevFest Seoul by Google Developer Group Korea

Seoul, S.Korea

PRESENTER FOR <HOSTING WEB APPLICATION FOR FREE UTILIZING GITHUB, NETLIFY AND CLOUDFLARE>

Nov. 2017

- Introduced the history of web technology and the JAM stack which is for the modern web application development.
- Introduced how to freely host the web application with high performance utilizing global CDN services.

6th CodeEngn (Reverse Engineering Conference)

Seoul, S.Korea

PRESENTER FOR <DEFCON 20TH : THE WAY TO GO TO LAS VEGAS>

Jul. 2012

- Introduced CTF(Capture the Flag) hacking competition and advanced techniques and strategy for CTF

6th Hacking Camp - S.Korea

S.Korea

PRESENTER FOR <METASPLOIT 101>

Sep. 2012

- Introduced basic procedure for penetration testing and how to use Metasploit

Writing

A Guide for Developers in Start-up

FOUNDER & WRITER

- Drafted daily news for developers in Korea about IT technologies, issues about start-up.

Facebook Page

Jan. 2015 - PRESENT

AhnLab

UNDERGRADUATE STUDENT REPORTER

- Drafted reports about IT trends and Security issues on AhnLab Company magazine.

S.Korea

Oct. 2012 - Jul. 2013

Program Committees

2016 **Problem Writer** 2016 CODEGATE Hacking Competition World Final

S.Korea

2013 **Organizer & Co-director** 1st POSTECH Hackathon

S.Korea

2012 **Staff** 7th Hacking Camp

S.Korea

2012 **Problem Writer** 1st Hoseo University Teenager Hacking Competition

S.Korea

2012 **Staff & Problem Writer** JFF(Just for Fun) Hacking Competition

S.Korea