Claud D. **Park**

SITE RELIABILITY ENGINEER · SOFTWARE ARCHITECT

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"Be the change that you want to see in the world."

Education

POSTECH(Pohang University of Science and Technology)   *Pohang, S.Korea*

B.S. IN COMPUTER SCIENCE AND ENGINEERING   *Mar. 2010 - Aug. 2017*

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

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

Danggeun Pay Inc. (KarrotPay)   *Seoul, S.Korea*

FOUNDING MEMBER & SITE RELIABILITY ENGINEER & INFRASTRUCTURE TEAM LEAD   *Mar. 2021 - Present*

- Everything that matters.
  - Here is some more details on everything
- Designed and provisioned the entire infrastructure on the AWS cloud to meet security compliance and acquire a business license for financial services in Korea.
- Continuously improved the infrastructure architecture since launching the service. (currently 3.6 million users)
- Established a standardized base for declarative management of infrastructures and service deployments, enabling operational efficiency and consistency. Over 90% of AWS resources were all managed through standardized terraform modules. All add-ons and service workloads on the Kubernetes cluster were managed on a GitOps basis with Kustomize and ArgoCD.
- Saved over 30% of the overall AWS costs by establishing a quarterly purchasing strategiy for RI (Reserved Instance) and SP (Savings Plan) and by introducing Graviton instances.
- Established a core architecture for regulating of outbound DNS traffic in multi-account and multi-VPC environments utilizing AWS Route53 DNS Firewall and FMS. This significantly increased the level of security confidence in the financial sector's segregated environment.
- Introduced Okta employee identity solution in the company, establishing security policies and configuring SSO integration with over 20 enterprise systems including AWS, GitHub, Slack, Google Workspace. Set up a Hub and Spoke architecture, enabling a collaborative account structure with the parent company, Daangn Market.

Danggeun Market Inc.   *Seoul, S.Korea*

SITE RELIABILITY ENGINEER   *Feb. 2021 - Mar. 2021*

Kasa
Seoul, S.Korea

Founding Member & Director of Infrastructure Division
Jun. 2018 - Jan. 2021

- Designed on-boarding process to guide new engineers, help them to focus on the right tasks, and set expectations to help them be successful at Infrastructure team.
- Migrated the orchestration system from DC/OS to Kubernetes which is based on AWS EKS. Managed 3 Kubernetes clusters and 300+ pods. Managed all Kubernetes manifests declaratively with Kustomize and ArgoCD.
- Designed and managed complex network configurations on AWS with 4 VPC and 100+ subnets. Separated the development network and operation network according to financial regulations. Established dedicated network connections from AWS VPC to partners' on-premise network based on AWS Direct Connect with secure connection using IPsec VPN. Provisioned OpenVPN servers with LDAP integration.
- Provisioned a observability system with Kafka, Elastic Stack(Filebeat, Heartbeat, APM Server, Logstash, Elasticsearch, Kibana). Collected log, uptime, tracing data from hosts, containers, pods and more. The ES cluster which has 9 nodes processed more than 1 billion documents per month. Wrote Terraform module to easily provision ES cluster on AWS EC2 instances.
- Provisioned a monitoring system with Kafka, Telegraf, InfluxDB, Grafana. Collected metrics from hosts, containers, pods and more. Wrote Terraform module to easily provision InfluxDB with HA on AWS EC2 instances.
- Introduced Kong API Gateway to easily connect all API microservices with a declarative management method based on Terraform and Atlantis to collaborate and audit change history.
- Provisioned the Directory Service for employee identity management based on OpenLDAP which guarantees HA with multi-master replication.
- Implemented Worker microservices consuming Kafka event topics for email, SMS, Kakaotalk and Slack notification. Developed in-house framework to easily build Kafka consumer microservice with common features including retry on failure, DLQ(Dead Letter Queue), event routing and more.
- Introduced Elastic APM to help distributed tracing, trouble-shooting and performance testing in MSA.

Omnious. Co., Ltd.
Seoul, S.Korea

Software Architect
Jun. 2017 - May 2018

- Provisioned an easily managable 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.

PLAT Corp.
Seoul, S.Korea

Co-founder & Software Engineer
Jan. 2016 - Jun. 2017

- 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.

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

Researcher
Mar. 2016 - Exp. Jun. 2017

- 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.

R.O.K Cyber Command, MND
Seoul, S.Korea

Software Engineer & Security Researcher (Compulsory Military Service)
Aug. 2014 - Apr. 2016

- 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.

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

Game Developer Intern at Global Internship Program
Jan. 2013 - Feb. 2013

- 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.

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

Researcher for <Detecting video's torrents using image similarity algorithms>
Sep. 2012 - Feb. 2013

- 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.

Software Maestro (funded by Korea Ministry of Knowledge and Economy)
Seoul, S.Korea

Software Engineer Trainee
Jul. 2012 - Jun. 2013

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

ShitOne Corp.

Seoul, S.Korea

SOFTWARE ENGINEER

Dec. 2011 - Feb. 2012

- 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.

SAMSUNG Electronics

S.Korea

FREELANCE PENETRATION TESTER

Sep. 2013, Mar. 2011 - Oct. 2011

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

Extracurricular Activity

B10S (B1t 0n 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 inisght for various industry from weekly industry analysis session.

Honors & Awards

INTERNATIONAL AWARDS

2021	**2nd Place**, AWS ASEAN AI/ML GameDay	*Online*
2020	**Finalist**, DEFCON 28th CTF Hacking Competition World Final	*Las Vegas, U.S.A*
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 AWARDS

2021	**2nd Place**, AWS Korea GameDay	*Seoul, S.Korea*
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*

COMMUNITY

2022	**AWS Community Builder (Container)**, Amazon Web Services (AWS)
2022	**HashiCorp Ambassador**, HashiCorp

Certificates

2023	**AWS Certified Advanced Networking - Specialty**, Amazon Web Services (AWS)
2023	**AWS Certified Developer – Associate**, Amazon Web Services (AWS)
2023	**AWS Certified Cloud Practitioner**, Amazon Web Services (AWS)
2022	**AWS Certified Security - Specialty**, Amazon Web Services (AWS)
2022	**AWS Certified Solutions Architect – Professional**, Amazon Web Services (AWS)
2019	**AWS Certified Solutions Architect – Associate**, Amazon Web Services (AWS)
2021	**AWS Certified SysOps Administrator – Associate**, Amazon Web Services (AWS)
2020	**Certified Kubernetes Application Developer (CKAD)**, The Linux Foundation
2023	**HashiCorp Certified: Consul Associate (002)**, HashiCorp
2023	**HashiCorp Certified: Terraform Associate (003)**, HashiCorp
2020	**HashiCorp Certified: Terraform Associate (002)**, HashiCorp

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   *Facebook Page*

FOUNDER & WRITER   *Jan. 2015 - PRESENT*

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

AhnLab   *S.Korea*

UNDERGRADUATE STUDENT REPORTER   *Oct. 2012 - Jul. 2013*

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

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*