

# Byungjin Park

Site Reliability Engineer · Software Architect

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

## Summary

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Site Reliability Engineer at fintech company KarrotPay. Have led growth at infrastructure departments in two fintech companies as lead engineer and founding member. 12+ years of diverse software engineering experience with specialties in software architecture design, infrastructure operation, backend development, and security engineering.

Love to contribute to open sources and tech communities by sharing knowledge and experience. Prefers a command line interface environment as a big fan of Vim, Linux, and macOS. Always trying to customize to find the most optimal environment. Interested in devising a better problem-solving method for challenging tasks, and learning new technologies and tools.

## Experience

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### Danggeun Pay Inc. (KarrotPay)

Seoul, S.Korea

Site Reliability Engineer & Infrastructure Team Lead

Mar. 2021 - Present

- Everything that matters.
- 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)

### 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.

Software Architect

Seoul, S.Korea

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.

Co-founder & Software Engineer

Seoul, S.Korea

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)

Researcher

Pohang, S.Korea

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

Software Engineer & Security Researcher (Compulsory Military Service)

Seoul, S.Korea

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.

## ShitOne Corp.

Software Engineer

Seoul, S.Korea

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.

# Honors & Awards

## International Awards

2018 **Martin C. And Margaret M. Lee Prize**, Best Performance in Macroeconomics Sequence  
= **Neubauer Fellowship**, Graduate Fellowship

Chicago, USA

Chicago, USA

=====**2nd Place**, AWS ASEAN AI/ML GameDay

Online

2021

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

2012 **First Prize in History**, French National History Competition (Concours General)

Paris, France

## Domestic 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

## Domestic Awards

2021	<b>2nd Place</b> , AWS Korea GameDay	Seoul, S.Korea
2015	<b>3rd Place</b> , WITHCON Hacking Competition Final	Seoul, S.Korea
2017	<b>Silver Prize</b> , KISA HDCON Hacking Competition Final	Seoul, S.Korea
2013	<b>Silver Prize</b> , KISA HDCON Hacking Competition Final	Seoul, S.Korea

## Community

2022	<b>AWS Community Builder (Container)</b> , Amazon Web Services (AWS)
2022	<b>HashiCorp Ambassador</b> , HashiCorp

## Certificates

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2022	<b>AWS Certified Security - Specialty</b> , Amazon Web Services (AWS)
2022	<b>AWS Certified Solutions Architect – Professional</b> , Amazon Web Services (AWS)
2019	<b>AWS Certified Solutions Architect – Associate</b> , Amazon Web Services (AWS)
2021	<b>AWS Certified SysOps Administrator – Associate</b> , Amazon Web Services (AWS)
2020	<b>Certified Kubernetes Application Developer (CKAD)</b> , The Linux Foundation
2020	<b>HashiCorp Certified: Terraform Associate</b> , HashiCorp

## Education

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<b>University of Chicago</b>	Chicago, USA
Ph.D. in Economics	2018 -
Advisors: <i>Fernando Alvarez, Mikhail Golosov, Lars Peter Hansen</i>	
<b>University of Chicago</b>	Chicago, USA
M.A. in Economics	2018 - 2020
<b>Paris School of Economics</b>	Paris, France
M.Sc. Analysis and Policy in Economics	2016 - 2018
Summa cum laude	
<b>École Normale Supérieure Ulm</b>	Paris, France
B.Sc. in Physics	2015 - 2016
Cum laude	