

Yilei Cai

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Skills

- Java, Python, Scala, Ruby, C++, SQL, Shell, JavaScript, C, MATLAB, SML
- Spark, Flink, Airflow, Hive, Oozie, Hadoop, Pig
- Machine Learning, Probability and Statistics, Modeling

Education

Carnegie Mellon University

M.S. IN COMPUTATIONAL BIOLOGY, SCHOOL OF COMPUTER SCIENCE

- Departmental Merit Fellowship (major GPA: 3.9/4.0)

Pittsburgh, PA

Sep. 2013 - May 2015

Duke University

M.S. IN NEUROBIOLOGY, SCHOOL OF MEDICINE

- Withdrawal from PhD Program

Durham, NC

Sep. 2011 - May 2013

Hong Kong University of Science and Technology

B.S. IN MOLECULAR BIOMEDICAL SCIENCES WITH MINOR IN MATHEMATICS, CHEMISTRY AND BIOLOGY

- University Scholarship, Lee Hysan Foundation Exchange Scholarship, Dean's List, First Class Honors

Hong Kong

Sep. 2007 - Jun. 2011

Work Experience

Omnius. Co., Ltd.

SOFTWARE ARCHITECT

- 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.

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

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

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

S.Korea

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.