

# Ikwhan Chang

(Matthew)

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## SUMMARY

Full-stack Software engineer more than six years of experience. Specialized in the **large-scale data analytics and visualization**. My recent interests are serverless development, modern JavaScript full-stack frameworks and its performance improvement.

## EXPERIENCE

### Urhyme, San Francisco, CA (A personal data analytics and visualization web service)

*Founder & Software Engineer, Jan. 2016 – present*

- Designed and developed a personal data analytics and visualization that collect the data from multiple third-party (e.g. Fitbit), determine whether user's data is doing well or not, create a visualized chart and user can share within our platform for motivation.
- Designed responsive UI modules using Bootstrap and ReactJS, API handlers using Redux and Bootstrap 4 from scratch.
- Developed web and social functions like JWT-based authentication, a form validation using Redux-form, dynamic charts using Chart.js.
- Developed all RESTful and MVC-based API server and its relational models (e.g. user, post, comment, plan, etc) using Play! and Slick.
- Designed the microservice architecture for sharing the resources and fault tolerance on the Docker and Kubernetes.
- Developed social web features like TinyUrl using AES, DOM-to-png parser, file uploader.
- Developed the database models and its asynchronous DAOs using Scala-slick, connected with Google Cloud SQL, and migrated to backend both primary DB and replicated DB
- **Stacks:** Play! Framework, Scala, Play-Akka, Play-slick, MySQL (Cloud SQL), Google Kubernetes Engine, React.js (redux, redux-form, thunk, axios, moment.js, dropzone.js, x-editable), jQuery, SASS, ESLint, Bootstrap 4, Node.js, Webpack, Babel, ES6

### Webcash Inc., Seoul, South Korea, FinTech (Financial Management)

*Software Engineer, Aug. 2010 - Mar. 2012*

- Integrated financial transaction data (e.g. credit/debit) from top financial vendors has 5M+ users per each company, and developed money data analytics and visualization using Spring MVC.
- Operated the large-scale online payment for the tuitions from **10+** top Korean universities with **0.3M+** students.
- Developed the online payment for **1K+** pharmacists, manufacture, and customers.
- **Stacks:** Spring Framework, JSP, Hibernate, Freemaker, jQuery, JavaScript

### Elancer Co., Ltd. Seoul, South Korea

*Software Engineer, Mar. 2009 – Jul. 2010*

- Developed the large-scale (**10K+ active users per day**) marketplace for freelancer using Spring MVC with velocity and MyBatis
- Renewed the conglomerate company website especially user management and log analytics service using Adobe Flex and ASP.NET

## EDUCATION

**M.S. in Computer Engineering, San Jose State University, San Jose, CA** Aug. 2015 - Dec. 2017

**B.S. in Computer Science and Engineering, Chung-Ang University, Seoul, South Korea** Mar. 2006 - Feb. 2015

## PUBLICATIONS & ACADEMIC PROJECTS

### Image Compression Storage Policy for OpenStack Swift (*master's project, Software-defined Network, 2016*)

- Added an image compression policy to provide the optimized web resources to be compressed simultaneously when uploaded.

### Dani Project (Social Web Service) (*2011, awarded on 1<sup>st</sup> prize with \$10K*)

- Developed an Adobe Flex web service to share user's memorable roads using Google Map, Open Social, BlazeDS, and GAE

### HTML5 and Mobile Web for Full-Stack Programmer, ISBN 9788960881327 (Korean)

- Used for key textbook of computer science for Samsung software course at Chung-Ang University (lecturer: Prof. Sungrae Cho)
- Dealt with basic of JavaScript, jQuery, CSS 3, HTML 5, Geolocation, Web Storage, Web Font, Canvas, Open API, OAuth.

### Instructor, Junior Tutoring Program, Chung-Ang University, Seoul, South Korea

- Courses: Cloud Computing, C++ Programming, Java Programming

## SKILLS

- **Languages & DB:** Java, Scala, JavaScript/ES6, TypeScript, PHP, JSP, MySQL, MariaDB, Oracle DB, MongoDB, Redis, Python, C/C++
- **Frameworks & Libraries:** ReactJS, Node.js, Express, Spring Boot/MVC, Play! Framework, Slick, Akka, Socket.io, Velocity, MyBatis, Hibernate
- **Cloud & Tools:** Google Cloud Platform, Amazon Web Service, Docker, Kubernetes, OpenStack, Maven, Bower, NPM/Yarn, Git, Jenkins, Gitlab CI, JWT