

# Junghyun Kim

SOFTWARE ENGINEER · DATA SCIENCE · CRYPTOGRAPHY · ALGORITHM

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## About Me

- A new graduate from Georgia Tech who is passionate about technology and looking for full time position in **Software Engineering**.
- Experienced in problem-solving and Object-Oriented Programming.
- Learn and apply new technologies quickly; Work well in a team or on an individual basis.
- **Language & OS: C/C++, JAVA, PYTHON, PHP, HTML, JAVASCRIPT, SQL, WINDOWS, MacOS, LINUX**
- **Skills: Parallel Computing(CUDA, OPENMP, CONCURRENCY), PROTO, BAZEL, Django**

## Education

### Georgia Institute of Technology

M.S. IN COMPUTER SCIENCE · MACHINE LEARNING

Atlanta, GA

Jan.2018-Dec.2018

### Georgia Institute of Technology

B.S. IN COMPUTER SCIENCE · THEORY, ARTIFICIAL INTELLIGENCE · GPA: 3.72/4.0

Atlanta, GA

Aug.2015-Dec.2017

## Experience

### Google · Google Ads (De-duped Reach Team)

Los Angeles, CA

SOFTWARE ENGINEERING INTERN · C++ · PYTHON · SQL · PROTO · BAZEL · PARALLEL/DISTRIBUTED COMPUTING

May. 2018 - Aug. 2018

- Built highly scalable parallel data processing pipeline for validating traffic estimation in Adwords using statistical estimation algorithm "HYPERLOGLOG++", Google's distributed database engine **F1**, and MapReduce with Google's high-scale parallel data pipeline library **FLUME**. My new system improved the performance by **10 times** compared to an old system.

### SAMSUNG Electronics · Security Lab

Seoul, S.Korea

RESEARCH INTERN · C++ · OPENMP

Jun. 2017 - Aug. 2017

- Conducted research on privacy preserving fingerprint authentication based on minutiae points with function-hiding Inner Product Encryption (IPE) to protect sensitive biometric data even when either the server or device is hacked.
- Implemented **C++** based prototype of privacy preserving fingerprint authentication protocol and tested over a large dataset and greatly improved performance by deploying CPU-based parallelism with **OPENMP**
- Paper: <https://goo.gl/JrTHuo>

### Georgia Institute of Technology · HPC Garage Lab

Atlanta, GA

RESEARCH ASSISTANT · C++ · OPENMP · CUDA

Aug. 2017 - Present

- Conducted research on accelerating Tensor Factorization algorithm (which is commonly used in machine learning and data science) using CPU and GPU based parallelism and **statistical sampling method**.

### Georgia Institute of Technology · Stadium - IoT Lab

Atlanta, GA

RESEARCH ASSISTANT · PYTHON · PHP · DJANGO

Aug. 2016 - Present

- Worked on analyzing and visualizing the data with **DJANGO** and **PHP** obtained from sensors in Bobby Dodd Stadium at Georgia Tech.

### Georgia Institute of Technology

Atlanta, GA

TEACHING ASSISTANT

Jan. 2016 - Present

- CS 3510 (Design & Analysis Algorithm), CS 4510 (Automata & Complexity), CS 2051 (Honors Discrete Math), MATH 3012 (Applied Combinatorics)

## Projects

### Honeycomb Critique

PROJECT MANAGER · NODE.JS · JAVASCRIPT · MYSQL

Jun. 2016 - Jul. 2016

- Created a web application that visualizes statistics of all classes' and instructor's grade distributions at Georgia Tech using Node.js and MYSQL.

### IT Factory COIN

PROJECT MANAGER · C++ · PHP · JAVASCRIPT · MYSQL

Mar. 2014 - Dec. 2015

- Created and managed online judge (like HackerRank) tailored for classroom setting using C/C++, PHP, and MYSQL.

### Withstudy

SOFTWARE ENGINEER · PHP · JAVASCRIPT · JAVA · MYSQL

Mar. 2013 - Nov. 2013

- Created a mobile application where students can manage study plans and extracurricular activities using PHP and JAVA (android programming).

## Honors & Awards

- 2013 **Honorable Mention**, SK Teen App Challenge
- 2011 **Silver Medal**, Korean Olympiad in Informatics
- 2011 **Gold Medal**, 5th National Programming Contest

Seoul, S. Korea

Seoul, S. Korea

Suwon, S. Korea