

# Joon Kyung Kim

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## RESEARCH INTERESTS

Computer Architecture • Compiler Optimizations • Operating Systems • Machine Learning

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## EDUCATION

### Georgia Institute of Technology

M.S. in Computer Science

| Expected May 2018

Area | Computing Systems

Advisor | [Dr. Hadi Esmaeilzadeh](#)

### Georgia Institute of Technology

B.S. in Computer Science

| May 2016

Advisor | [Dr. Hadi Esmaeilzadeh](#)

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## HONORS AND AWARDS

**Distinguished Paper Award in IEEE Symposium on High Performance Computer Architecture** | 2016

"TABLA: A Unified Template-based Framework for Accelerating Statistical Machine Learning"

**Georgia Tech President's Undergraduate Research Award** | 2015

Received a salary award (\$1,500) for the TABLA project

**William Orr Dingwall Foundation** | 2011

2011 Korean Ancestry Grant Scholarship Recipient

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## PUBLICATIONS

### Conference Papers

..... 2017 .....

[P3] J. Park, H. Sharma, D. Mahajan, **J. Kim**, P. Olds, and H. Esmaeilzadeh, "[Scale-Out Acceleration for Machine Learning](#)" 50<sup>th</sup> International Symposium on Microarchitecture (MICRO), October 2017.

..... 2016 .....

[P2] H. Sharma, J. Park, D. Mahajan, E. Amaro, **J. Kim**, C. Shao, and H. Esmaeilzadeh, "[From High-Level Deep Neural Models to FPGAs](#)" 49<sup>th</sup> International Symposium on Microarchitecture (MICRO), October 2016.

[P1] D. Mahajan, J. Park, E. Amaro, H. Sharma, A. Yazdanbakhsh, **J. Kim**, and Hadi Esmaeilzadeh, "[TABLA: A Unified Template-based Framework for Accelerating Statistical Machine Learning](#)," 22<sup>nd</sup> IEEE Symposium on High Performance Computer Architecture (HPCA), March 2016. (**Distinguished Paper Award**)

### Technical Reports

..... 2015 .....

[TR1] D. Mahajan, J. Park, E. Amaro, H. Sharma, A. Yazdanbakhsh, **J. Kim**, and Hadi Esmaeilzadeh, "[TABLA: A Unified Template-based Framework for Accelerating Statistical Machine Learning](#)," SMARTech, SCS Technical Report, GT-CS-15-07.

## PROFESSIONAL EXPERIENCE

### AMAZON WEB SERVICES | SOFTWARE DEVELOPMENT ENGINEER INTERN

SUMMER 2017 | SEATTLE, WA

TEAM: AWS AURORA POSTGRES

MENTOR: [Arun Sudhir](#) • MANAGER: [Ashutosh Galande](#)

- Designed and implemented a client authentication mechanism for AWS Aurora Postgres and RDS Postgres customers by integrating the AWS IAM (Identity and Authentication Management) service.

### DELL SECUREWORKS | SOFTWARE DEVELOPER CO-OP

SPRING 2015, SUMMER 2014, FALL 2013 | ATLANTA, GA

TEAM: CUSTOMER PORTAL TEAM

MENTOR: [Veera Rayala](#) • MANAGER: [Chris Phillips](#)

- Developed the customer web portal system and a company internal tool for visualizing server performance metrics.

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## ARTIFACTS

- TABLA: An accelerator generator for statistical machine learning algorithms | <http://act-lab.org/artifacts/tabla>
- DNNWEAVER: Framework for accelerating Deep Neural Networks | <http://act-lab.org/artifacts/dnnweaver>

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## TEACHING EXPERIENCE

### ■ Teaching Assistant

Course	Design and Analysis of Algorithms (CS 3510)
Instructor	<a href="#">Dr. Richard Peng</a>
Location	Georgia Institute of Technology
Semester	Fall 2017

### ■ Teaching Assistant

Course	Design and Analysis of Algorithms (CS 3510)
Instructor	<a href="#">Dr. Merrick Furst</a>
Location	Georgia Institute of Technology
Semester	Spring 2017

### ■ Teaching Assistant

Course	Design and Analysis of Algorithms (CS 3510)
Instructor	<a href="#">Dr. Richard Peng</a>
Location	Georgia Institute of Technology
Semester	Fall 2016

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## PROFESSIONAL ACTIVITIES

### CONFERENCE REVIEWS

- HPCA | 2017

### PROFESSIONAL MEMBERSHIPS

- ACM SIGARCH Online Membership | Since 2017