

JEONG, GEONHWA

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RESEARCH INTERESTS

Computer architecture, Hardware/software co-design, Domain specific accelerators, Computer system design for big data, Deep learning, VLSI design

EDUCATION

Ph.D. Student in Computer Science Aug. 2019 -

Specializing in Computer Architecture

Georgia Institute of Technology (Georgia Tech)

Bachelor of Science in Creative IT Engineering Mar. 2013 - Feb. 2019

Double Major in Computer Science and Engineering

Summa Cum Laude

Pohang University of Science and Technology (POSTECH)

Exchange Student July 2013 - Dec. 2013

State University of New York at Stony Brook

RESEARCH EXPERIENCES

Computer Vision Lab at POSTECH Sep. 2018 - Feb. 2019

Research Student (Advisor: Prof. Suha Kwak)

Pohang, Republic of Korea

Since there has been the disparity between target task and surrogate task for self-supervised learning, our team conducted the research on task-specific self-supervised learning with object detection as the target task.

Compiler Optimization Research Lab at POSTECH Sep. 2017 - June 2018

Research Student (Advisor: Prof. Hanjun Kim)

Pohang, Republic of Korea

I was engaged in three projects including implementation of IoT platform for various types of users (manufacturer, service developer, user), development of programmable magnetic blocks to teach computational thinking to kids and development of hot function/basic block detector using LLVM compiler.

Database and Data Mining Lab at POSTECH Mar. 2015 - Nov. 2015

Research Student (Advisor: Prof. Wook-Shin Han)

Pohang, Republic of Korea

I was involved in a team to develop a new graph database system which can process a large amount of streaming data. I participated in the initial design of the query processing engine and the development of memory management system to support the engine. Also, I designed the evaluation method for the system.

Computer Graphics and Vision Lab at KAIST

Research Student (Advisor: Prof. Jinah Park)

June 2012 - Dec. 2012

Daejeon, Republic of Korea

I led a research project to reconstruct 3D images of the brain using 2D medical images. Given manual segmentation of the certain region in 2D images from doctors, the system provided the reconstructed 3D image of the segmented region and predicted area.

WORK EXPERIENCES

VoyagerX

Software Engineer

Feb 2019 - Jul. 2019

Seoul, Republic of Korea

I developed a mobile application for automatic meeting notes with speaker diarization using deep learning model.

Samsung Research

Field Training

July 2018 - Aug. 2018

Seoul, Republic of Korea

I was involved in a team developing a cloud management system, which is used by the members of Samsung Research to develop their own programs, in GitOps manner to keep the more robust system.

Korea Augmentation to the US Army

Service Member

Nov. 2015 - Aug. 2017

Seoul, Republic of Korea

I served mandatory military service as a movement specialist with the United States Army and participated in three combined exercises (KR 17, UFG 17, and KR 18).

Kakao Corp.

Intern

Jan. 2015 - Feb. 2015

Seongnam, Republic of Korea

I developed an abuse detection system to automatically identify abusers to prevent general users from being exposed to inappropriate posts and comments.

PUBLICATIONS

[1] Kyoungmin Kim, In Seo, Wook-shin Han, Jeong-Hoon Lee, Sungpack Hong, Hassan Chafi, Hyungyu Shin, **Geonhwa Jeong**. 2018. "TurboFlux: A Fast Continuous Subgraph Matching System for Streaming Graph Data." Proceedings of the 44th International Conference on Management of Data, ACM SIGMOD, Houston, USA.

[2] **Geonhwa Jeong**, Jaeil Kim, Taeho Kim, Jinah Park. 2012. "3D Interactive Visualization Method with Confirmation and Prediction of the Object Shape for Assistance of Manual Image Segmentation." Proceedings of the 39th KIISE Fall Conference, Korea.

HONORS AND AWARDS

Scholarship from Kwanjeong Educational Foundation

Sep. 2019 -

University Scholarship for Student Mentoring Program

Sep. 2017 - Dec. 2018

National Scholarship from ICT Creative Consilience Program

Mar. 2013 - Feb. 2019

Scholarship from Korea Hydro & Nuclear Power

Mar. 2018

Army Achievement Medal from the US Army

Aug. 2017

SKILLS

Programming	C/C++, Java, Verilog, Ocaml
Scripting	Python, Javascript, PHP
Others	Hadoop, Spark, PyTorch

EXTRA-CURRICULAR ACTIVITIES

Student Mentoring Program at POSTECH	Sep. 2017 - Present
Qualcomm IT Tour	June 2018
Einstein Class of Korea Hydro & Nuclear Power	Dec. 2017 - Feb. 2018
Proud Postechian Club	Sep. 2017 - Dec. 2017