Beomyeol Jeon

Contact Information

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Research Interests

Distributed Systems, Cloud Computing, Machine Learning, Non-volatile Memory

Education

University of Illinois Urbana-Champaign, Urbana, IL, USA — Aug 2016 – present
Ph.D. Student in Computer Science

Seoul National University, Seoul, Korea — Mar 2008 – Feb 2016
B.S. in Computer Science and Engineering (summa cum lauda)

The University of Texas at Austin, Austin, TX, USA — Jan 2015 – May 2015
Undergraduate Exchange Student in Computer Science

Research Experience

Distributed Protocols Research Group, UIUC — Aug 2016 – present
Graduate Research Assistant

- Advisor: Prof. Indranil Gupta
- Working on a new fault tolerance technique in distributed machine learning systems.
- Working on the improvement of distributed systems by utilizing non-volatile memory (NVRAM)

Cloud and Mobile Systems Lab, Seoul Nat'l University — Jul 2015 – June 2016
Undergraduate Research Intern

- Advisor: Prof. Byung-Gon Chun
- Designed and implemented a deep neural network module for **Dolphin**, an open-source distributed machine learning platform built on top of Apache REEF
- Worked on the performance modeling and an optimization tool to determine an optimized configuration for a distributed machine learning system

Database Systems Lab, Seoul Nat'l University — Sep 2014 – Dec 2014
Undergraduate Research Intern

- Advisor: Prof. Bongki Moon
- Worked on the performance improvement of H-Store, a distributed in-memory database, with NVMe SSD
- Worked on the performance improvement of MongoDB for trajectory data

Work Experience

Somansa Inc., Seoul, Korea — Jan 2011 – Dec 2013
Researcher

- Supervisors: Mr. Taewan Kim and Mr. Hwancheol Lim
- Developed a network data loss prevention (DLP) solution **Mail-i** and a database audit and protection (DAP) solution **DB-i** by analyzing network packets

Google Inc., Mountain View, CA, USA — May 2017 – August 2017
Software Engineering Intern

- TODO

Other Experience

Google Korea, Seoul, Korea — Sep 2011 – Aug 2012
Student Ambassador

- Participated in hosting Google Developers University Hackathon Korea 2012

Publications

[3] (Under submission) Yunseong Lee, Woo-Yeon Lee, Joo Seong Jeong, Gyeong-In Yu, Joo Yeon Kim, **Beomyeol Jeon**, Gunhee Kim, Markus Weimer, Brian Cho, Byung-Gon Chun. Dolphin: Automated System Configuration of Distributed Machine Learning, USENIX ATC '17, July 2017.

[2] (Accepted with minor revisions) Byung-Gon Chun, Yingda Chen, Brian Cho, Andrew Chung, Tyson Condie, Carlo Curino, Chris Douglas Matteo Interlandi, **Beomyeol Jeon**, Joo Seong Jeong, Gye-Won Lee, Yunseong Lee, Apache REEF: Retainable Evaluator Execution Framework, ACM Transactions on Computer Systems (TOCS), 2017.

[1] Byung-Gon Chun, Brian Cho, **Beomyeol Jeon**, Joo Seong Jeong, Gunhee Kim, Joo Yeon Kim, Woo-Yeon Lee, Yun Seong Lee, Markus Weimer, Gyeong-In Yu. Dolphin: Runtime Optimization for Distributed Machine Learning. ICML ML Sys '16 workshop, June 2016.

Awards & Honors

The National Scholarship for Science and Engineering 2008 – 2010, 2014, 2015

- Full tuition funded by *Korea Student Aid Foundation*

Outgoing Exchange Student Program Scholarship Spring 2015

- $2,000 funded by the *Office of International Affairs* at Seoul National University

Computer Skills

Languages and techniques

- C, C++, Java, Python, CUDA, OpenCL
- Apache Maven, CMake, Unix Makefile

Tools

- Apache Hadoop/YARN, Apache REEF, Apache Spark, TensorFlow