



Hello, I'm a computer engineer with machine learning and signal processing background.

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EDUCATION

- **Ulsan National Institute of Science and Technology (UNIST)** Ulsan, South Korea
Bachelor in Electrical Engineering, Computer Science and Engineering Mar 2014 – Feb 2018 (estimated)
 - **GPA of Computer Science and Engineering:** 4.15/4.3 (97.5/100)
 - **GPA of Electrical Engineering:** 3.94/4.3 (95.4/100)
 - **GPA of both majors:** 4.00/4.3 (96.0/100)
 - **Total Grade Point Average:** 3.79/4.3 (93.9/100)

SCHOLARSHIPS

Currency measure: 1 USD = 1,092.30 KRW (13 Dec, 2017)

- **NAVER UNIST Undergraduate Poster Award (NAVER UUPA)** NAVER Corp., UNIST
₩2,500,000 (\$2,289) Dec 2017
- **UC Berkeley Entrepreneurship Programme** UNIST
₩9,975,200 (\$9,132) Jan 2017 – Mar 2017
- **Living Scholarship** UNIST
₩2,140,000 (\$1,959) Mar 2016 – Dec 2017
- **Allowance** UNIST
₩2,517,600 (\$2,305) Mar 2016 – Dec 2017
- **National Science & Engineering Scholarship** Korea Student Aid Foundation
₩12,588,000 (\$11,524) Mar 2016 – Dec 2017
- **Korea Supercomputing Challenge (KSC 2015)** KISTI Supercomputing Education Center
₩500,000 (\$458) (shared by 2 members) Oct 2015
- **HeXATHON** UNIST, NAVER Corp.
₩1,500,000 (\$1,373) (shared by 4 members) May 2015
- **Tutor for Engineering Programming I (3 semesters)** UNIST
₩1,200,000 (\$1,099) Sep 2014 – Dec 2015
- **Academic Performance Scholarship** UNIST
₩12,660,000 (\$11,590) Mar 2014 – Dec 2015

EXPERIENCE

- **NAVER UNIST Undergraduate Poster Award (NAVER UUPA)** NAVER Corp., UNIST
Poster presentation of Extreme Low Resolution Activity Recognition: won 1st place Dec 2017
- **EgoVid Inc. (<http://egovid.com>)** Ulsan, South Korea
Machine Learning Researcher & Developer May 2016 – Present
 - **Drone Project Manager:** Autonomous drone project using ROS on NVIDIA Jetson TX2 embedded board.

- **Publication:** M. S. Ryoo, K. Kim and H. J. Yang, "Extreme Low Resolution Activity Recognition with Multi-Siamese Embedded Learning," *AAAI Conference on Artificial Intelligence*, New Orleans, Louisiana, February 2018. [*acceptance rate: 24.6%*] <https://arxiv.org/pdf/1708.00999.pdf>
- **Realtime Demonstration Running on Embedded Device at CVPR 2017:** Demonstrated my work running on NVIDIA Jetson TX2 and helped my colleague for implementing different demonstration about Video Anonymisation Algorithm at CVPR (Computer Vision Pattern Recognition) 2017 conference. https://youtu.be/7jkSum_pj9o?t=25s
- **UC Berkeley Entrepreneurship Programme:** Visited UC Berkeley Sutardja Center of Entrepreneurship & Technology for 9 weeks to exchange ideas about making a start-up company. UC Berkeley News Article: <http://scet.berkeley.edu/keeping-personal-machine-learning-meets-egovid/>
- **Attended Conferences:** AAAI Conference on Artificial Intelligence 2017, San Francisco, California, USA
Asilomar 2016, Pacific Grove, California, USA
Ubicomp 2016, Heidelberg, Germany
- **Linux GPU Computing Server Setup for Machine Learning:** Installed Ubuntu Server and programs needed for machine learning and sharing devices with multiple users. VNC remote desktop, Docker and Virtualenv.
- **Study: Machine Learning and Computer Vision:** Studied machine learning and computer vision with Coursera, Udacity courses.
- **Study: OFDM Radar Signal Processing:** Studied OFDM radar signal processing for possible future work in radar classification machine learning problem.

- **Private Teaching** Personal
OOP (C++), Data Structure (C++), and Programming Languages (SML, Rocket, Python) *Mar 2016 – Dec 2016*
- **Private Teaching** Personal
Taught C Language for pre-high school student. *Jan 2016 – Feb 2016*
- **USPTO Patent Information Crawler** UNIST
Developed in Python for building custom database. *Dec 2015 – Apr 2016*
- **Korea Supercomputing Challenge (KSC 2015)** KISTI Supercomputing Education Center
MPI parallel computing competition: won 5th place *Oct 2015*
- **Intel Xeon Phi optimisation, parallelisation education** Intel Corp.
Completed the education with practices about OpenMP, Vectorisation, and Intel compiler. *Aug 2015*
- **Personal Linux Server Buildup** Personal
Fedora server buildup for personal use *Aug 2015*
 - File cloud server
 - Multimedia streaming server
 - Git server
 - Dropbox-like synchronisation server
 - URL shortener
 - Web server
- **WISSET Startup Springboard** UNIST
Completed the entrepreneurship programme. *Aug 2015*
- **Private Teaching** Personal
Taught mathematics for high school student. *July 2015 – Aug 2015*
- **HeXATHON** UNIST, NAVER Corp.
QR code waiting system implemented with Raspberry Pi: won 1st place *May 2015*
- **UNIST Startup Clinic** UNIST, NAVER Corp.
Smart home app controlling electric output *Mar 2015*
- **Private Teaching** Personal
Taught physics for pre-high school student. *Jan 2015 – Feb 2015*
- **Tutor for Engineering Programming I** UNIST
Taught the subject for 3 semesters, 3 university students per each semester. *Sep 2014 – Dec 2015*

- **Private Teaching** Personal
Taught mathematics for high school student. *Jul 2014 – Aug 2014*
- **Math Teacher at Private School** Morning of Math
Problem-solving assistant for high school student. *Jul 2014 – Aug 2014*
- **Patent: Falling out of hair management system** South Korea
Hair proportion analysis algorithm implemented in CxImage and MFC. *Jan 2013 – Jul 2014*
 - <https://patents.google.com/patent/KR20140094301A/en>
- **Korea International Science and Engineering Fair (KISEF 2012)** National Science Museum
Exhibited and Demonstrated PowerUpdater2 at Daejeon Convention Center. *Jan 2012*
- **Korea Olympiad in Informatics (KOI 2011)** National Information Society Agency
*Demonstrated PowerUpdater2: won **bronze medal**.* *Sep 2011*
- **Sparkware (<http://sparkware.co.kr>)** Personal
Personal Website Management (XpressEngine), Program Development (C++, MFC) *May 2010 – Aug 2013*
 - **PowerUpdater, PowerUpdater2:** An updater program that can be customised by users easily with GUI menu.
 - **Waviano:** Playing piano with keyboard using multiple music files.
 - **PowerRegister:** An customisable activation program for Windows application programmers.
 - **DirectoryDateName:** Easily make directory with name containing current date.
 - **Flash programs:** Simple Flash programs.
- **Flash programming** Personal
Studied and implemented simple Flash programs. *Nov 2004 – Apr 2010*
 - Elementary, middle school teachers used my programs.
 - Managed a blog to release some programs.

SKILLS AND KNOWLEDGE

Deep Learning, Signal Processing, Linux server buildup, Web development, Machine integration, Video editing and filmography, Product design

LANGUAGES, FRAMEWORKS AND TOOLS

C · C++ · Python · Linux Bash · TensorFlow / Keras (Machine learning) · MPI (Parallel programming) · CUDA (GPU parallel programming) · MATLAB · Git (Version control) · Docker · Raspberry Pi (IoT Linux) · MFC (Windows programming) · Java · HTML · PHP · MySQL / Maria DB · Flash action script · Processing · NXT Robot C · Xpress Engine(Website) · Wordpress(Website) · L^AT_EX