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*
  - **Contribution Award[1]**: Chairman's Award
  - **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 = 1,079.93 KRW (23 Feb, 2018)

- **NAVER UNIST Undergraduate Poster Award (NAVER UUPA)** — NAVER Corp., UNIST
  ₩2,500,000 ($2,315) — *Dec 2017*

- **UC Berkeley Entrepreneurship Programme** — UNIST
  ₩9,975,200 ($9,237) — *Jan 2017 – Mar 2017*

- **Living Scholarship** — UNIST
  ₩2,140,000 ($1,982) — *Mar 2016 – Dec 2017*

- **Allowance** — UNIST
  ₩2,517,600 ($2,331) — *Mar 2016 – Dec 2017*

- **National Science & Engineering Scholarship** — Korea Student Aid Foundation
  ₩12,588,000 ($11,656) — *Mar 2016 – Dec 2017*

- **Korea Supercomputing Challenge (KSC 2015)** — KISTI Supercomputing Education Center
  ₩500,000 ($463) (shared by 2 members) — *Oct 2015*

- **HeXATHON** — UNIST, NAVER Corp.
  ₩1,500,000 ($1,389) (shared by 4 members) — *May 2015*

- **Tutor for Engineering Programming I (3 semesters)** — UNIST
  ₩1,200,000 ($1,111) — *Sep 2014 – Dec 2015*

- **Academic Performance Scholarship** — UNIST
  ₩12,660,000 ($11,723) — *Mar 2014 – Dec 2015*

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[1]Students who have shown especially good behaviour or enhanced the university's honour can be given a contribution award. The contribution award winner shall be selected by deliberation of the Committee based on recommendations from the head of the school (department) in each school (department). In 2018, among 704 undergraduates from various departments, 6 people have been awarded.

PUBLICATIONS

- M. S. Ryoo, <u>K. Kim</u> 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

- **Patent**: Falling out of hair management system
  https://patents.google.com/patent/KR20140094301A/en

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 – Dec 2017

  - **Drone Project Manager**: Autonomous drone project using ROS on NVIDIA Jetson TX2 embedded board.
  - **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
  Taught Computer Science and Engineering subjects to two university students.   Mar 2016 – Dec 2016

  - Object Oriented Programming (C++)
  - Data Structure (C++)
  - Principles of Programming Languages (SML, Racket, Python)

- **Private Teaching**   Personal
  Taught C Language to a 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 & synchronisation server
  - Multimedia streaming server
  - Web server (Gitlab, URL Shortener)

- **WISET Startup Springboard**   UNIST
  Completed the entrepreneurship programme.   Aug 2015

- **Private Teaching** — Personal
  Taught mathematics to a 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 to a pre-high school student. — *Jan 2015 – Feb 2015*
- **Tutor for Engineering Programming I** — UNIST
  Taught the subject for 3 semesters, to 3 university students per each semester. — *Sep 2014 – Dec 2015*
- **Private Teaching** — Personal
  Taught mathematics to a high school student. — *Jul 2014 – Aug 2014*
- **Math Teacher at Private School** — Morning of Math
  Problem-solving assistant for high school students. — *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*
- **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, Machine integration, Web development, Video editing and film-making, 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 · NVIDIA Jetson TX2 (Embedded board and Linux) · 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) · LaTeX