MINGUN PAK
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EDUCATION

M.Sc. in Computer Science, University of Southern California, Los Angeles, CA	*Dec 2018*
B.Sc. in Computer Science, Inha University, Incheon, South Korea	*Aug 2015*

TECHNICAL SKILLS

Specialty	Deep Learning, Natural language Processing, Web Tech, Android, iOS, Computer Security
Programming language	Python(strong), C++, C#, Swift3, Ruby, Java, PHP, JavaScript, HTML5, CSS, Assembly
Database	MySQL(strong), PostgreSQL, MongoDB, Oracle 11g, MSSQL
Framework	Django, Tensorflow, Keras, PyTorch, Caffe, openCV, Flask, Selenium, jQuery, AngularJS
Software	AWS, Heroku, Docker, Google Analytics, Github, Trello, Source Tree, Slack

WORK EXPERIENCE

Research and Development Intern, Gridspace, Los Angeles, California   *May 2017 – July 2017*
Technical Skills List: **Python, Keras, Pytorch, Natural language Processing**
- Designed Sentiment analyzer which has 91.5% accuracy using hybrid CNN+LSTM model with bi-gram
- Designed Anomaly detector based on text auto encoder, which uses GRU+Attention model with gradient-clipping

Software Developer Intern, Samsung Electronics, Seoul, South Korea   *Mar 2014 – Apr 2015*
Technical Skills List: **Assembly, C, C++, Computer Architecture, System Programming**
- Designed the 64Bit Multi-Core OS prototype that increases performance by 50% of context switching speed

Research and Development Intern, Ministry of Science, Seoul, South Korea   *Jul 2013 – Feb 2014*
Technical Skills List: **Ruby**, **Android, Secure Coding, Compiler**
- Led as project manager to create the Automatic Secure Coding Verification Tool for Android Apps that detects vulnerable source code by utilizing approximately 100 rules
- Designed the Java Source Code Parser using Ruby

PROJECTS

AlphaKu : Sudoku Solver Application   *Jan 2017 – Feb 2017*
Technical Skills: **Android, Python, Tensorflow, OpenCV, Deep Learning**
- Designed the solver that recognizes Sudoku in a given natural picture like a newspaper and then find the solution.
- Improved MNIST date set up to 99.58% accuracy by Deep Learning

ATGA: Auto Tagging Gallery App   *Mar 2015 – Jun 2015*
Technical Skills: **Android, Python, Flask, MySQL, Caffe API, OpenCV, Deep Learning**
- Created the gallery app that automatically detects and tags objects within photographs
- Developed an unique algorithm utilizing the SURF and Union-find algorithm to increase speed of image region detection, the prior step to extracting an image's feature point, which enables the machine learning

PUBLICATIONS

Pak, M. An Analysis on Techniques for Preventing Android Reverse Engineering, *KIPS*   *Apr 2014*

TEACHING EXPERIENCE

Fast Campus Co., Seoul, South Korea	*Jan 2016 – Apr 2016*

- Lecture: Web Programming School - **Python, Linux, Network, Django, Data Structure**

National Cyber Command of National Defense, Seoul, South Korea	*Mar 2014 – Apr 2014*

- Lecture: **Kali Linux Penetration Testing**

Korea South-Eastern Power Co., Seoul, South Korea	*Dec 2013 – Dec 2013*

- Lecture: **System Hacking, Reverse Engineering, Web and Network Hacking, PenTesting**

AWARDS

2nd place, Programming Contest, Inha University, South Korea	*Sep 2014*
2nd place, White Hat Hacking Contest, Samsung Electronics, South Korea	*Jun 2014*
1st place, Academy Hackerton, Inha University, South Korea	*Dec 2013*
Finalist, 10th KISA HDCON(Hacking Defence Contest), South Korea	*Nov 2013*
27th place out of 1540 teams(worldwide), Codegate CTF, MSIP, South Korea	*May 2013*
2nd place, H.U.S.T Hacking Festival, Hongik University, South Korea	*Dec 2012*