

MINGUN PAK

mingunpa@usc.edu

1156 36th Place, Los Angeles, CA 90007

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	NLP(strong), Web Tech(strong), Machine Learning, Android, iOS, Computer Security
Programming language	Python(strong), C++, C#, Swift3, Ruby, Java, PHP, JavaScript, HTML5, CSS
Database	MySQL(strong), PostgreSQL, MongoDB, 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
- Developed Anomaly detector based on call log, which uses GRU+Attention model with gradient-clipping & coverage

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**

- Created 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

PERSONAL 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 natural picture like a newspaper and then finds the solution.
- Improved MNIST data set up to 99.58% accuracy by ensemble CNN model

ATGA: Auto Tagging Gallery App

Mar 2015 – Jun 2015

Technical Skills: **Android, Python, Flask, MySQL, Caffe API, OpenCV, Machine Learning**

- Created the gallery app that automatically detects and tags objects within photographs
- Developed a unique algorithm utilizing the SURF and Union-find algorithm to increase speed of image region detection.

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