

Jiwon Kim

kjw6855@gmail.com
<https://kjw6855.github.io>

Research Interests

Software-defined networks, distributed systems, databases, operating systems, and system software for non-volatile memory

Education

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| Mar 2015 - Oct 2016 | Sungkyunkwan University , Suwon, Republic of Korea
Master of Science in Platform Software
Major: <i>System Software for Non-Volatile Memory</i> Advisor: Prof. Hwansoo Han
GPA: 4.33/4.5 |
| Mar 2011 - Feb 2015 | Sungkyunkwan University , Suwon, Republic of Korea
Bachelor of Science in Software Engineering
GPA: 4.06/4.5 (Major: 4.16/4.5) |

Professional Experience

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| Sep 2016 - <i>Current</i> | ATTO Research , Seongnam, Republic of Korea
<i>Research Engineer</i> <ul style="list-style-type: none">• Created flow-specific database for concurrent and consistent software-defined network updates• Designed and developed SDN applications to manage underlay/overlay networks in private cloud• Developed secure SDN controller cluster with TLS, RBAC, and flow monitoring• Implemented domain-specific language and command-line interface for SDN controller |
| Jan 2013 - Feb 2013 | Acryl Inc. , Seoul, Republic of Korea
<i>Intern</i> <ul style="list-style-type: none">• Developed prototype of Android messenger application |
| Feb 2012 | Hancom corp. , Seongnam, Republic of Korea
<i>Intern</i> <ul style="list-style-type: none">• Participated in quality assurance team |

Research Experience

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| Mar 2014 - Oct 2016 | Sungkyunkwan University , Suwon, Republic of Korea
<i>Research Assistant</i> - Advisor: Prof. Hwansoo Han <ul style="list-style-type: none">• Participated in projects on system software for non-volatile memory |
| Aug 2013 - Feb 2014 | Purdue University , West Lafayette, IN, USA
<i>Research Intern</i> - NIPA-Purdue Capstone Project - Advisor: Prof. Eric Matson <ul style="list-style-type: none">• Designed and developed road guidance system for visually impaired with Arduino and Android application |
| Mar 2012 - Jan 2013 | Sungkyunkwan University , Suwon, Republic of Korea
<i>Co-op Research Assistant</i> - Cooperative Project with AhnLab - Advisor: Prof. Jee-Hyong Lee <ul style="list-style-type: none">• Analyzed existing thesis and source code on high-performance packet classification for Netfilter |

Publications

Jungsik Choi, [Jiwon Kim](#), Hwansoo Han. Efficient Memory Mapped File I/O for In-Memory File Systems, *USENIX Workshop on Hot Topics in Storage and File Systems*, Jul. 2017.

Jungsik Choi, Joonwook Ahn, [Jiwon Kim](#), Sungtae Ryu, Hwansoo Han. In-Memory File System with Efficient Swap Support for Mobile Smart Devices, *IEEE Transactions on Consumer Electronics*, vol. 62(3), pp. 275-282, Aug. 2016.

Patents

- US Jungsik Choi, Hwansoo Han, Jiwon Kim, Memory mapping management method for nonvolatile main memory system, US Patent 10,185,654, 2019.
- Korean Jiwon Kim, Yongjoo Song, Method, apparatus and computer program for supporting distributed snat in a cloud environment in a software defined network, KR Application, 10-2018-0152102 , 2019.
- Jiwon Kim, Jaekyun Shim, Yongjoo Song, Methods, apparatus and computer programs for providing high availability and reliability in software defined network, KR Application, 10-2018-0152097, 2019.
- Yongjoo Song, Jiwon Kim, Method, apparatus and computer program for tracking traffic using software defined networking, KR Application, 10-2018-0132669, 2019.
- Hyunwoo Park, Jiwon Kim, Inwook Hwang, Jaeho Kim, Beomsoo Park, Yongjoo Song, Method and computer program for handling trouble using packet-out message in software defined networking environment, KR 10-1969304, 2019.
- Jiwon Kim, Hyunwoo Park, Inwook Hwang, Jaewoong Chung, Method, apparatus and computer program for defending software defined network, KR 10-1932656, 2018.
- Hyunwoo Park, Jiwon Kim, Inwook Hwang, Jaeho Kim, Beomsoo Park, Yongjoo Song, Method and computer program for handling trouble using flow-mod message in software defined networking environment, KR 10-1931543, 2018.
- Jiwon Kim, Inwook Hwang, Yongjoo Song, Method, apparatus, and computer program for verifying host status information in a software defined network, KR 10-1931139, 2018.
- Hwansoo Han, Jungsik Choi, Jiwon Kim, Method for atomic update of memory mapped files stored in non-volatile memory and control apparatus thereof, KR 10-1881038, 2018.

Teaching Experience

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| Mar 2015 - Oct 2016 | Sungkyunkwan University , Suwon, Republic of Korea
<i>Teaching Assistant</i> <ul style="list-style-type: none">• SWE2013 - Software Creative Project (Spring 2016)• SWE3010 - Compiler Design (Fall 2015)• ICE2002 - Data Structures (Fall 2015)• GEDB029 - Basis and Practice in Programming (Spring 2015) |
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Honors and Awards

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| Aug 2018 | Hall of Fame, ATTO Research |
| Dec 2015 | Outstanding Paper Award, Korea Institute of Information Scientists and Engineers |
| Feb 2013 | Dean's List, Sungkyunkwan University |
| Sep 2012 | Dean's List, Sungkyunkwan University |

Scholarships

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| Feb 2016 - Aug 2016 | Simsan Scholarship, Sungkyunkwan University |
| Feb 2015 - Aug 2016 | Masters Scholarship, Sungkyunkwan University |
| Mar 2011 - Feb 2015 | National Science & Technology Scholarship, Korea Student Aid Foundation |