

Min Oh

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EDUCATION

- Ph.D. Candidate in Computer Science** Aug 2016 — May 2021
Virginia Tech, Blacksburg, VA, USA
- B.E. in Computer Engineering** Feb 2015
Gachon University, Incheon, South Korea

WORK EXPERIENCE

- Applied Scientist** May 2022 — Current
Microsoft Research, Redmond, WA, USA
- Data & Applied Scientist** July 2021 — May 2022
Microsoft Azure, Redmond, WA, USA
- Data & Applied Scientist Intern** May 2020 — Aug 2020
Microsoft Azure, Redmond, WA, USA
- Data & Applied Scientist Intern** May 2019 — Aug 2019
Microsoft Azure, Redmond, WA, USA
- Research Intern** May 2018 — Aug 2018
Microsoft Research, Redmond, WA, USA
- Research Intern** Jun 2017 — Aug 2017
Microsoft Research, Redmond, WA, USA
- Research Associate** Mar 2015 — Aug 2016
Gachon University, Incheon, South Korea

HONORS & AWARDS

- Graduate Fellowship**, Department of Computer Science, Virginia Tech Nov 2020
- Data and Decisions Research Grant**, Office of the EVP and Provost, Virginia Tech Dec 2018
- Principal Award on Graduation**, Gachon Univeristy Feb 2015
- Prize of Gachon Pride for Excellence in Research**, Gachon Univeristy Nov 2014
- Grand Prize for Presentation Competition**, Gachon Univeristy Nov 2011
- Merit-based Scholarships**, Gachon Univeristy 2008; 2011 — 2014

TEACHING EXPERIENCE

- Teaching Assistant**, Department of Computer Science, Virginia Tech Aug 2016 — Dec 2019
- Advanced Machine Learning (CS 5824) - Fall 19
 - Introductory Data Analytics and Visualization (CS 3654) - Spring 18
 - Introduction to Programming in C++ (CS 1044) - Fall 16, Spring 17

PUBLICATIONS

Peer-Reviewed Journals

1. **Min Oh** and Liqing Zhang. "Generalizing Predictions to Unseen Sequencing Profiles via Deep Generative Models" *Scientific Reports* 12.1 (2022): 1-10.
2. **Min Oh** and Liqing Zhang. "DeepMicro: Deep Representation Learning for Disease Prediction Based on Microbiome Data" *Scientific Reports* 10.1 (2020): 1-9.
3. Erdal Cosgun and **Min Oh**. "Exploring the Consistency of the Quality Scores with Machine Learning for Next-Generation Sequencing Experiments" *BioMed Research International* 2020 (2020): 8531502.
4. Chaoqi Chen*, Christine Pankow*, **Min Oh***, Lenwood Heath, Liqing Zhang, Pang Du, Kang Xia, Amy Pruden. "Effect of Antibiotic Use and Composting on Antibiotic Resistance Gene Abundance and Resistome Risks of Soils Receiving Manure-derived Amendments" *Environment International* 128 (2019): 233-243. *Equal contribution
5. **Min Oh**, Amy Pruden, Lenwood Heath, Xia Kang, Liqing Zhang. "MetaCompare: A Computational Pipeline for Prioritizing Environmental Resistome Risk" *FEMS Microbiology Ecology* 94.7 (2018): fiy079.
6. Chihyun Park, Youngmi Yoon, **Min Oh**, Yu Seok Jong, Jaegyeon Ahn. "Systematic Identification of Differential Gene Network to Elucidate Alzheimer's Disease." *Expert Systems with Applications* 85 (2017): 249-260.
7. Youhyeon Hwang, **Min Oh**, Giup Jang, Taekeon Lee, Chihyun Park, Jaegyeon Ahn, Youngmi Yoon. "Identifying the Common Genetic Networks of ADR (adverse drug reaction) Clusters and Developing an ADR Classification Model." *Molecular BioSystems* 13 (2017): 1788-1796.
8. **Min Oh**, Jaegyeon Ahn, Taekeon Lee, Giup Jang, Chihyun Park, Youngmi Yoon. "Drug voyager: A Computational Platform for Exploring Unintended Drug Action." *BMC Bioinformatics* 18.1 (2017): 131.
9. Soyoun Hwang, Youhyeon Hwang, **Min Oh**, Youngmi Yoon. "Construction and Comparison of Drug-Disease Pathway Network for Drug Repositioning." *Journal of Korean Institute of Information Technology (JKIIT)* 14.9 (2016): 119-129.
10. Giup Jang, Youhyeon Hwang, **Min Oh**, Taekeon Lee, Youngmi Yoon. "Novel Drug Similarity Measuring Method based on Text Mining for Predicting Similar Drugs." *Journal of Korean Institute of Information Technology (JKIIT)* 14.7 (2016): 127-137.
11. Taekeon Lee, Youhyeon Hwang, **Min Oh**, Youngmi Yoon. "Target Prediction Based On PPI Network." *Journal of the Korea Society of Computer and Information* 21.3 (2016): 65-71.
12. Youhyeon Hwang, **Min Oh**, Youngmi Yoon. "Extraction of Specific Common Genetic Network of Side Effect Pair, and Prediction of Side Effects for a Drug Based on PPI Network." *Journal of the Korea Society of Computer and Information* 21.1 (2016): 115-123.
13. Youhyeon Hwang, **Min Oh**, Youngmi Yoon. "Identification of Prognosis-specific Network and Prediction for Estrogen Receptor-negative Breast Cancer Using Microarray Data and PPI Data." *Journal of the Korean Society of Computer and Information* 20.2 (2015): 137-147.
14. Jeeyeon Lee, **Min Oh**, Youhyeon Hwang, Youngmi Yoon. "Classification of Molecular Sub-types of Breast Cancer Using Integrated Gene Expression Data." *Journal of Korean Institute of Information Technology (JKIIT)* 13.2 (2015): 163-173.
15. **Min Oh**, Jaegyeon Ahn, Youngmi Yoon. "A Network-Based Classification Model for Deriving Novel Drug-Disease Associations and Assessing Their Molecular Actions." *PLoS One* 9.10 (2014): e111668.
16. **Min Oh** and Youngmi Yoon. "Drug-Repositioning Based on Distance Features on the PPI Network." *Journal of Korean Institute of Information Technology (JKIIT)* 11.12 (2013): 205-211.

Peer-Reviewed Abstract & Posters

1. **Min Oh** and Erdal Cosgun. "Unsupervised Deep Representation Learning for Genetic Variant-based Clustering of Individuals" *ASHG 2019*, Houston, USA, October 2018.

2. **Min Oh** and Erdal Cosgun. "Exploring the Consistency of the Quality Scores with Machine Learning for Next-Generation Sequencing Experiments" *ASHG 2018*, San Diego, USA, October 2018.
3. **Min Oh** and Youngmi Yoon. "A Novel Generation of Drug Pathway Elucidates New Indication of Existing Drugs" *ISMB 2015*, Dublin, Ireland, July 2015.
4. **Min Oh** and Youngmi Yoon. "A Novel Method for Elucidating microRNA and Transcription Factor Co-Regulatory Networks in Prostate Cancer." *ISMB 2014*, Boston, USA, July 2014.
5. **Min Oh** and Youngmi Yoon. "Network Based Classification Model for Deriving Novel Drug-Disease Associations." *ISMB 2013*, Berlin, Germany, July 2013.

TALKS

Unsupervised Deep Learning for Next Generation Sequencing Data Microsoft Research, Redmond, WA, USA	Aug 2018
Enabling Machine Learning for Variant Call Format Data Analysis Microsoft Research, Redmond, WA, USA	Aug 2017
Computational Drug Repositioning Strategy & Its Application Utah-Inha DDS & Advanced Therapeutics Research Center, Incheon, South Korea	Mar 2015

PROJECTS

Deep Learning Infrastructure for Precision Medicine with Multi-Omics Data , Data and Decisions Destination Area (DD-DA), <i>Virginia Tech</i> .	Jan 2019 — Present
Developing Computational Tools to Identify Critical Control Points for Mitigating the Spread of Antibiotic Resistance in Agro-ecosystem (2017-68003-26498), <i>United States Department of Agriculture</i> .	Aug 2017 — Dec 2018
Network Based Classification Model for Deriving Drug Repositioning (NRF-2015R1A2A2A03004088), <i>National Research Foundation of Korea</i> .	May 2015 — Aug 2016
A Study on the Classification of Cancer Prognosis and Cancer Treatment (NRF-2010-0008639), <i>National Research Foundation of Korea</i> .	May 2012 — Apr 2015

PATENT

Min Oh, Jaegyoon Ahn, and Youngmi Yoon. "Apparatus and Method for Assessing Effects of Drugs Based on Networks." <i>KR Patent 10-1776094</i>	Sep 2017
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SOCIAL SERVICE

Military Service Republic of Korea Army, Sergeant - Award: Army citation from commander of 507 th infantry brigade	Jul 2008 — Jun 2010
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