# Junghwan (Jay) Lee

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| **EDUCATION** | Columbia University, New York, United States<br>Master of Arts in Statistics | 09/2018 - 02/2020 |
| | Sungkyunkwan University, Seoul, South Korea<br>Bachelor of Science in Industrial Engineering<br>Bachelor of Economics | 03/2012 - 03/2016 |
| **EXPERIENCE** | *Research Staff Associate*<br>Columbia University, NY | 02/2020 - Present |
| | *Research Assistant*<br>Columbia University, NY | 01/2019 - 12/2019 |
| | *Researcher*<br>Seoul National University College of Medicine, Seoul, Korea | 10/2018 - 01/2019 |
| | *Army Officer*<br>The 2nd Operational Command, Deagu, Korea | 02/2016 - 06/2018 |
| | *Research Assistant*<br>Sungkyunkwan University, Seoul, Korea | 01/2015 - 12/2015 |

**RESEARCH INTERESTS**     **Artificial Intelligence**, **Healthcare**, **Medicine**

**PUBLICATIONS**     **Journal Articles & Peer-reviewed Conference Proceedings**

0. **J. Lee**, C. Liu, Y. Sun, Z. Chen, C. Weng, Deep Learning for Rare Disease: a Scoping Review. *work in progress*

1. **J. Lee**, C. Liu, C. Ta, C. Weng, Towards Better Diagnosis Prediction using Bidirectional Recurrent Neural Networks, *MedInfo 2021*, 2021.

2. **J. Lee**, JH. Kim, C. Liu, G. Hripcsak, C. Ta*, C. Weng*, Columbia Open Health Data for COVID-19 Research, *Journal of Medical Internet Research, in press.*

3. **J. Lee**, C. Ta, JH. Kim, C. Liu*, C. Weng*, Severity Prediction for COVID-19 Patients via Recurrent Neural Networks, *AMIA Informatics Summit 2021*, 2021.

4. **J. Lee***, C. Liu*, JH. Kim, A. Butler, N. Shang, C. Pang, K. Natarajan, P. Ryan, C. Ta, C. Weng, Comparative Effectiveness of Medical Concept Embedding for Feature Engineering in Phenotyping, *JAMIA Open*, Volume 4, Issue 2, April 2021.

5. JH. Kim, M. Hua, RA. Whittington, **J. Lee**, C. Liu, CN. Ta, ER. Marcantonio, TE. Goldberg, C. Weng, A Machine Learning Approach to Identifying Delirium from Electronic Health Records, *Under review*.

6. JH. Kim, CN. Ta, C. Liu, C. Sung, AM. Butler, LA. Stewart, L. Ena, C. Friedman, JR. Rogers, N. Shang, **J. Lee**, H. Liu, A. Ostropolets, K. Natarajan, PB. Ryan, SM. Lee, MSV. Elkind, C. Weng, Towards Clinical Data-Driven Eligibility Criteria Optimization for Interventional COVID-19 Clinical Trials, *JAMIA*, 2020.

7. J.R. Rogers, **J. Lee**, Z. Zhou, YK. Cheung, G. Hripcsak, C. Weng, Contemporary Use of Real-World Data for Clinical Trial Conduct in the United States: A Scoping Review, *JAMIA*, 2020.

8. A. Butler, **J. Lee**, Y. So, L. Busacca, K. Marder, HN. Ginsberg, D. Frederick, I. Castaneda, C. Weng, Impact of IMPACT: Longitudinal Analysis of an Integrated Patient Scheduling System in a Clinical Research Setting, *AMIA Annual Symposium 2020*, 2020.

9. C. Liu, C. Ta, J. Rogers, Z. Li, **J. Lee**, A. Butler, N. Shang, F. Kury, L. Wang, F. Shen, L. Ena, C. Friedman, H. Liu, C. Weng, Ensembles of Natural Language Processing Systems for Portable Phenotyping Solutions, *Journal of Biomedical Informatics 100*, 103318, 2019.

**Miscellaneous**

1. **J. Lee**\*, C. Ta\*, C. Liu, JH. K, C. Weng, COHD-COVID: Publicly Shared COVID-19 Statistics Mined from EHR Data, Observational Health Data Science and Informatics (OHDSI) Symposium, 2020, Poster presentation.

2. **J. Lee**, Severity Prediction in COVID-19: Can We Predict Disease Severity and Outcomes at Early Stage, Columbia University Zuckerman Institute, October 2020, Invited talk.

3. **J. Lee**, C. Liu, N. Shang, X. Jiang, K. Chen, K. Kalluri, C. Pang, K. Natarajan, P. Ryan, C. Weng, Generate Concept Representations using OMOP Ontology Graph, Observational Health Data Science and Informatics (OHDSI) Symposium, 2019, Poster presentation.

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| **SERVICES** | *npj Digital Medicine*, *Journal of Medical Internet Research*, Reviewer |
| **HONOURS & AWARDS** | Commendation for Commitment, Republic of Korea Army, 2018 <br> Meritorious Unit Commendation, The 2nd Operational Command, 2017 <br> Merit-based Scholarship, Sungkyunkwan University, 2015 <br> Academic Scholarship, Sungkyunkwan University, 2013 <br> Gifted Student of Incheon National University, 2004-2005 <br> Young Gifted Student of Incheon City Office of Education, 2002-2004 |