

Joon Sik Kim

Last Updated: September 7, 2023

Contact

Email: joon@dynamofl.com
Website: <https://wnstlr.github.io>

Academic History

Carnegie Mellon University

Doctor of Philosophy, Machine Learning

Thesis: Methods and Applications of Explainable Machine Learning

Advisor: Ameet Talwalkar

Pittsburgh, PA

May 2023

Carnegie Mellon University

Master of Science, Machine Learning (GPA 3.86/4.00)

Pittsburgh, PA

May 2020

California Institute of Technology

Bachelor of Science, Computer Science (GPA 4.0/4.3)

Pasadena, CA

June 2017

Employment History

DynamoFL

Machine Learning Research Scientist

San Francisco, CA

Sep 2023 - Now

Microsoft Research

Summer Research Intern

Redmond, WA

June 2021 - Aug 2021

J.P.Morgan

Summer Intern at AI Research

New York, NY

May 2019 - Aug 2019

SK Inc.

Machine Learning Research Intern

Seoul, South Korea

June 2017 - Aug 2017

Computer Vision Lab, California Institute of Technology

Undergraduate Research Student for Prof. Pietro Perona

Pasadena, CA

July 2016 - Dec 2016

California Institute of Technology

Undergraduate Research Student for Prof. Yisong Yue

Pasadena, CA

June 2015 - June 2016

California Institute of Technology

Undergraduate Research Student for Dr. Vasumathi Raman

Pasadena, CA

July 2014 - Nov 2014

Criminal Investigation Command, Ministry of National Defense

Soldier, Software Developer, Interpreter

Seoul, South Korea

Oct 2012 - July 2014

Laser Interferometer Gravitational-wave Observatory (LIGO)

Undergraduate Research Student for Dr. Parameswaran Ajith

Pasadena, CA

Jan 2012 - Aug 2012

Publications¹

9. **Joon Sik Kim**, Valerie Chen, Danish Pruthi, Nihar Shah, Ameet Talwalkar. *Assisting Human Decisions in Document Matching*. Transactions on Machine Learning Research (TMLR), 2023.
8. Keegan Harris, Valerie Chen, **Joon Sik Kim**, Ameet Talwalkar, Hoda Heidari, Steven Wu. *Bayesian Persuasion for Algorithmic Recourse*. Neural Information Processing Systems (NeurIPS), 2022.
7. **Joon Sik Kim**, Gregory Plumb, Ameet Talwalkar. *Sanity Simulations for Saliency Methods*. International Conference on Machine Learning (ICML), 2022. (Spotlight)
6. Valerie Chen*, Jeffrey Li*, **Joon Sik Kim****, Gregory Plumb**, Ameet Talwalkar. *Interpretable Machine Learning: Moving From Mythos to Diagnostics*. ACM Queue 19.6 (2022): 28-56.
5. Kwangho Kim, Jisu Kim, Manzil Zaheer, **Joon Sik Kim**, Frederic Chazal, Larry Wasserman. *PLLayer: Efficient Topological Layer based on Persistence Landscapes*. Neural Information Processing Systems (NeurIPS), 2020.
4. **Joon Sik Kim**, Jiahao Chen, Ameet Talwalkar. *FACT: A Diagnostic for Group Fairness Trade-offs*. International Conference on Machine Learning (ICML), 2020.
3. David I. Inouye, Leqi Liu, **Joon Sik Kim**, Bryon Aragam, Pradeep Ravikumar. *Automated Dependence Plots*. Uncertainty in Artificial Intelligence (UAI), 2020.
2. Chih-Kuan Yeh*, **Joon Sik Kim***, Ian E.H. Yen, Pradeep Ravikumar. *Representer Point Selection for Explaining Deep Neural Networks*. Neural Information Processing Systems (NeurIPS), 2018.
1. Matteo Ruggero Ronchi, **Joon Sik Kim**, Yisong Yue. *A Rotation Invariant Latent Factor Model for Movement Discovery from Static Poses*. IEEE International Conference on Data Mining (ICDM), 2016.

PRE-PRINTS

1. Valerie Chen, Muyu Yang, Wenbo Cui, **Joon Sik Kim**, Ameet Talwalkar, Jian Ma. *Best Practices for Interpretable Machine Learning in Computational Biology*. bioRxiv 2022.10.28.513978

PROFESSIONAL ACTIVITIES

Reviewer (FAccT 2023, ICML 2022, FAccT 2022, ICML 2021); Program Committee (Workshop on Fair AI in Finance, NeurIPS 2020).

FELLOWSHIPS, AWARDS

Kwanjeong Foundation Graduate Research Fellowship	2017 - 2021
Caltech Bhansali Family Prize in Computer Science	2017
Caltech CMS Celebration of Undergraduate Research Best Demo/Poster Award	2015
Caltech Summer Undergraduate Research Fellowship	2014, 2015, 2016
Caltech Physics 11 Summer Undergraduate Research Fellowship	2012

TEACHING

10-725 Convex Optimization (Carnegie Mellon University)	Spring 2023
10-737 Creative AI (Carnegie Mellon University)	Fall 2019

¹* indicates equal contribution; including conference workshop papers