

Yo Joong Choe

Ph.D. Student at Carnegie Mellon University

Updated October 8, 2021

Email: yjchoe@cmu.edu **Website:** <https://yjchoe.github.io> **Preferred Name:** YJ Choe

RESEARCH INTERESTS Statistical Machine Learning, Feedback-Driven Machine Learning, Sequential Decision Making, Deep Learning, Natural Language Processing

EDUCATION **Carnegie Mellon University** Pittsburgh, PA, USA
Ph.D. in Statistics and Machine Learning Aug 2015 – Present
Advisor: Aarti Singh *(On Leave Jun 2017 – Dec 2020)*

Carnegie Mellon University Pittsburgh, PA, USA
M.S. in Machine Learning Aug 2015 – May 2017
Thesis: Finding Relationships Between Structural and Functional Brain Networks via Connectome Fingerprinting
Advisors: Aarti Singh, Timothy Verstynen, and Sivaraman Balakrishnan

University of Chicago Chicago, IL, USA
B.S. in Mathematics, Honors Sep 2011 – Jun 2015
B.S. in Computer Science, Honors

WORK EXPERIENCE **Kakao Brain** Seongnam, South Korea
Research Scientist Aug 2019 – Nov 2020
Research Areas: Deep Learning, Natural Language Processing

Kakao Seongnam, South Korea
Research Scientist Jul 2017 – Aug 2019
Research Areas: Deep Learning, Natural Language Processing

HONORS **Franklin V. Taylor Memorial Best Paper Award, IEEE SMC** 2018
Phi Beta Kappa, University of Chicago 2014

PUBLICATIONS **Comparing Sequential Forecasters** ([arXiv](#), [code](#))
Yo Joong Choe, Aaditya Ramdas
Preprint (2021)
(Preliminary work presented at JSM 2021.)

An Empirical Study of Invariant Risk Minimization ([arXiv](#), [code](#))
Yo Joong Choe, Jiyeon Ham, Kyubyong Park
ICML Workshop on Uncertainty and Robustness in Deep Learning (2020)

KorNLI and KorSTS: New Benchmark Datasets for Korean Natural Language Understanding ([paper](#), [data](#))

Jiyeon Ham^{*}, [Yo Joong Choe](#)^{*}, Kyubyong Park^{*}, Ilji Choi, Hyungjoon Soh
Findings of the Association for Computational Linguistics: EMNLP (2020)

word2word: A Collection of Bilingual Lexicons for 3,564 Language Pairs ([paper](#), [code](#))

[Yo Joong Choe](#)^{*}, Kyubyong Park^{*}, Dongwoo Kim^{*}
Proceedings of The 12th Language Resources and Evaluation Conference (2020)

Jejueo Datasets for Machine Translation and Speech Synthesis ([paper](#), [code](#))

Kyubyong Park, [Yo Joong Choe](#), Jiyeon Ham
Proceedings of The 12th Language Resources and Evaluation Conference (2020)

Predicting Drug-Target Interaction Using a Novel Graph Neural Network with 3D Structure-Embedded Graph Representation ([paper](#), [preprint](#))

Jaechang Lim, Seongok Ryu, Kyubyong Park, [Yo Joong Choe](#), Jiyeon Ham, Woo Youn Kim
Journal of Chemical Information and Modeling (2019)

A Neural Grammatical Error Correction System Built On Better Pre-training and Sequential Transfer Learning ([paper](#), [code](#))

[Yo Joong Choe](#)^{*}, Jiyeon Ham^{*}, Kyubyong Park^{*}, Yeoil Yoon^{*}
Proceedings of the Fourteenth Workshop on Innovative Use of NLP for Building Educational Applications (2019)

Discovery of Natural Language Concepts in Individual Units of CNNs ([paper](#), [poster](#), [code](#))

Seil Na, [Yo Joong Choe](#), Dong-Hyun Lee, Gunhee Kim
International Conference on Learning Representations (2019)

Local White Matter Architecture Defines Functional Brain Dynamics ([paper](#), [preprint](#), [slides](#))

[Yo Joong Choe](#), Sivaraman Balakrishnan, Aarti Singh, Jean Vettel, Timothy Verstynen
IEEE International Conference on Systems, Man, and Cybernetics (SMC) (2018)
Franklin V. Taylor Memorial Best Paper Award

Learning Diverse Overcomplete Dictionaries via Determinantal Priors ([abstract](#))

Maruan Al-Shedivat, [Yo Joong Choe](#), Neil Spencer, Eric P. Xing
ICML Workshop on Geometry in Machine Learning (2016)

MISCELLANEOUS

Probabilistic Interpretations of Recurrent Neural Networks (report)

Collaborators: Jaehyeok Shin, Neil Spencer

CMU Course Project (2017)

A Statistical Analysis of Neural Networks (report)

CMU Course Project (2016)

Deep Learning for Socioeconomic Inference Using Google StreetView Images (blog)

Mentors/Collaborators: James Evans, Nathaniel Sauder, Zhongtian Dai, Rafael Turner, Vrushank Vora

University of Chicago Knowledge Lab (2014–2015)

Sparse Additive Models with Shape Constraints (report, slides, code)

Mentors: John Lafferty, Sabyasachi Chatterjee, Min Xu

University of Chicago Computer Science REU (2014)

TEACHING

Teaching Assistant

Carnegie Mellon University

Special Topics: Methods of Statistical Learning Spring 2021

Statistical Machine Learning II Fall 2016

Introduction to Probability Modeling Spring 2016

Statistical Computing Fall 2015

University of Chicago

Machine Learning and Large-Scale Data Analysis Spring 2015

Foundations of Computational Data Analysis Winter 2015

Calculus I-II-III Fall 2012 – Spring 2013

SERVICES

Program Committee / Reviewer

ICML Workshop on Adaptive & Multitask Learning 2019

LANGUAGES

Programming

Python (deep learning, machine learning, and NLP packages), R, Matlab

Spoken & Written

English, Korean