Jesse He

Curriculum Vitae

(419) 378-5584
jessehe.inbox@gmail.com
he-jesse

Education

UC San Diego, Halıcıoğlu Data Science Institute, San Diego, California
PhD Student, Advised by Profs. Yusu Wang, Gal Mishne

The Ohio State University, Columbus, OH
B.S. Mathematics; B.A. Computer and Information Science, *magna cum laude* May 2022

Research Experience

SU2023-Present **Graduate Student Researcher**, *UC San Diego*, San Diego, CA
Advised by Profs. Yusu Wang, Gal Mishne

SU2021 **Emerging Issues in Cybersecurity REU**, *New Mexico Tech*, Sorocco, NM (online)
Advised by Prof. Subhasish Mazumdar

Research Interests

My research interests lie in using geometric and topological techniques to analyze, visualise, and interpret complex data, including manifold learning, topological data analysis, and explainable and interpretable geometric deep learning.

Publications

Jesse He, Tristan Brugère, and Gal Mishne. "Product Manifold Learning with Independent Coordinate Selection". In: *Proceedings of 2nd Annual Workshop on Topology, Algebra, and Geometry in Machine Learning (TAG-ML)*. Ed. by Timothy Doster et al. Vol. 221. Proceedings of Machine Learning Research. PMLR, 2023, pp. 267–277. URL: `https://proceedings.mlr.press/v221/he23a.html`.

Teaching Experience

Graduate Teaching Assistant

WI 2024 **DSC 206: Algorithms for Data Science**
UC San Diego, Halıcıoğlu Data Science Institute

Undergraduate Grader

AU2021-SP2022 **Math 5590H/5111, Math 5591H/5112: Honors Abstract Algebra I, II**
The Ohio State University Department of Mathematics

AU2020-SP2021 **CSE 3521: Survey of Artificial Intelligence I**
The Ohio State University Department of Computer Science and Engineering

AU2019 **CSE 2221: Software Components**
The Ohio State University Department of Computer Science and Engineering

Other

SP2020 **MMC Digital Sandbox Project Group Instructor**
Ohio State University Media, Marketing, and Communications Scholars

Skills

Programming Python, Matlab, R, C, C++, C#, Java
Other Git, LaTeX, Max/MSP/Jitter, Cockos REAPER

Languages

Mandarin Conversational Japanese Basic Spanish Basic

Other Interests

Digital Music Synthesis, Music Theory and Composition