
EDUCATION

- **University of Illinois at Urbana-Champaign** 3.91/4.00
Master of Science in Computer Science (with thesis) 2020 - 2023
 - Advisor: Prof. Sanmi Koyejo
 - Thesis topics: federated learning, domain adaptation, healthcare
- **University of Illinois at Urbana-Champaign** 3.94/4.00
Bachelor of Science in Computer Engineering 2016 - 2020
- **Zhejiang University** 3.95/4.00
Bachelor of Engineering in Electronics and Computer Engineering 2016 - 2020

RESEARCH INTERESTS

I am broadly interested in trustworthy machine learning. For my MS thesis, I explored the data heterogeneity, security, and robustness aspects of distributed machine learning for healthcare applications (e.g. biomedical imaging), with a specialized focus on the federated domain adaptation (FDA) problem both empirically and theoretically.

SELECTED PROJECTS

- **Federated Domain Adaptation (FDA) for Healthcare** Urbana-Champaign, Illinois
Research Assistant under supervision of Prof. Sanmi Koyejo 2022 - Now
 - Leverage demographic information as auxiliary tasks to improve domain adaptation performance for COVID-19 medical imaging dataset **MIDRC** for both centralized and federated settings
 - Propose a novel gradient projection method by extracting the valuable components of model updates from source clients with the assistance of the target gradient, significantly improve FDA performance
 - Our proposed framework outperforms the state-of-the-art unsupervised FDA methods with limited additional time and space complexity on various healthcare datasets
 - The further empirical and theoretical analysis for FDA problem is submitted to ICML 2023.
- **Clustered Federated Learning** Urbana-Champaign, Illinois
Research Assistant under supervision of Prof. Sanmi Koyejo 2021 - 2022
 - Perform data poisoning attacks on clustered federated system FESEM and verify its vulnerabilities, implement and apply geometric median robust defense
 - Design two-level federated clustering architecture for better personalization with non-iid distributions
- **Bio Text Mining** Urbana-Champaign, Illinois
Data Mining Group at Computer Science Department, UIUC 2019 - 2020
 - Participate in building a biomedical named entity recognition (BioNER) system, aiming to tag words concerning 17 specific types (such as chemical, and disease) for biochemical paper abstracts
 - Leverage GMM model and design a knowledge-based raw text selection algorithm to refine the expansion results

PUBLICATIONS

- **Enyi Jiang***, Jacky Y. Zhang*, Oluwasanmi O Koyejo. *Federated Domain Adaptation via Gradient Projection.* in submission to ICML 2023. ([preprint](#))
- **Enyi Jiang**, Oluwasanmi O Koyejo. *Federated Domain Adaptation for Healthcare.* ([preprint](#))
- **Enyi Jiang**, Haisong Zhang. *A New Coarse and Fine-grained Chinese Word Segmentation Benchmark.*(2022). No.CN202210157392.7 (Chinese Patent)

- Xuan Wang, Yingjun Guan, Weili Liu, Aabhas Chauhan, **Enyi Jiang**, Qi Li, David Liem, Dibakar Sigdel, John Caufield, Peipei Ping and Jiawei Han, *EVIDENCEMINER: Textual Evidence Discovery for Life Sciences*, in Proc. 2020 Annual Conf. of the Association for Computational Linguistics (ACL 2020), (PDF) ([System demo](#)), Seattle, WA, July 2020
- Shirui Luo, Jiahuan Cui, Madhu Vellakal, Jian Liu, **Enyi Jiang**, Seid Koric, Volodymyr Kindratenko. (2019). *Review and Examination of Input Feature Preparation Methods and Machine Learning Models for Turbulence Modeling*. ([PDF](#))

INTERNSHIPS

NLP Intern

Shenzhen, Guangdong
2021

Tencent AI Lab

- Topic: Chinese word segmentation (CWS) benchmark. 1st author of the patent.
- Propose new coarse and fine-grained CWS labeling standards, a dataset consisting hard cases and extensive domains, and filtered/cleaned Chinese word embeddings.

AWARDS

- Second place in UIUC Ashby Prize in Computational Science Hackathon ([news](#)) May 2022
- Graduate with Highest Honors of ECE Department at UIUC July 2020
- Outstanding Graduates of Zhejiang University July 2020
- Summer 2019 SPIN Intern Completion with Recognition Letter ([link](#)) July 2019
- Dean's List of UIUC Mar 2019
- Meritorious Winner of Mathematical Contest In Modeling ([certificate](#)) ([paper](#)) Mar 2018
- Academic First-Class Scholarship of ZJU-UIUC Institute (RMB 60,000) 2017, 2018
- First-Class Student Award of Zhejiang University Nov 2017

TEACHING

- **CS 448**: Natural Language Processing, *Teaching Assistant* Fall 2021
- **CS 361**: Probability and Statistics for Computer Science, *Teaching Assistant* Fall 2020
- **CS 225**: Data Structures, *Teaching Assistant* Spring 2020
- **Math 213**: Discrete Mathematics, *Teaching Assistant* Fall 2019

REVIEWING AND SERVICE

- **Reviewer**: ICML Workshop on Adversarial Machine Learning Frontiers 2022

SKILLS

- **Programming Languages**: Python, C, C++, R, SystemVerilog, Matlab, Java