

HUI WEI

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EDUCATION

- College of Information and Computer Sciences, UMass Amherst** Sept.2020 - Present
Doctor of Philosophy in Computer Science, Advisor: Benjamin Marlin
Research Interests: Machine Learning for Healthcare
- Courant Institute of Mathematical Sciences, New York University (NYU)** May 2019
Master of Science in Computer Science, Advisor: Narges Razavian
- Beijing University of Posts and Telecommunications (BUPT)** July 2017
Bachelor of Engineering in Telecommunication Engineering

RESEARCH EXPERIENCE

- Building Risk Score/Index for Suicide using Veteran Affairs data** Sept.2020 - Aug.2021
Supervisor: Hong Yu, UMass Lowell, Kun Chen, University of Connecticut
- Explore the impact of social determinant of health (SDoH) factors extracted from zip codes, ICD-9 codes and clinical notes for suicide prediction using random forest and elastic net
 - Build risk score/index for suicide death incorporating SDoH factors extracted from clinical notes using Veteran Affairs data
- Multitask Prediction of Disease Onset from EHR data** Aug.2019 - June.2020
Supervisor: Narges Razavian, NYU Langone Health
- 100 most common lab values of NYU EHR data were used to predict 283 diseases onset after one year.
 - Implemented three innovative deep learning models for time series prediction
 - Implemented three ways to merge time-variant lab values with time-invariant demographics, and Focal Loss to improve prediction AUPRC for imbalanced diseases.
- Assessing Clinical Diagnosis for Alzheimer's Disease and Lewy Body Disease using Autopsy-confirmed Results** Feb.2019 - June.2021
Supervisor: Narges Razavian, NYU Langone Health
- The National Alzheimer's Coordinating Center (NACC) dataset was used to assess the clinical diagnosis quality for Alzheimer's disease, Lewy body disease and their combination - the Lewy body variant of Alzheimer's disease at all dementia stages evaluated by the CDR score.
 - Demonstrated that dementia subtype differentiation in the clinic has low accuracy over all dementia stages, which might lowers the quality of the corresponding clinical trails.
 - Demonstrated that the clinical diagnosis of dementia subtypes are biased against Black/African-American and female participants.

PUBLICATIONS

1. **Hui Wei**, Arjun V. Masurkar, Narges Razavian, "On Gaps of Clinical Diagnosis of Dementia Subtypes: A Study of Alzheimer's Disease and Lewy Body Disease" (AAIC poster, submitted to Alzheimer's & Dementia) [medRxiv]

TECHNICAL SKILLS

Programming Languages	C/C++, Python, MATLAB, \LaTeX , Markdown
Tools & Libraries	PyTorch, Scikit-Learn, DGL, OpenCV, CVX, Pystan