

# HUI WEI

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## EDUCATION

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- 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

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- 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

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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

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<b>Programming Languages</b>	C/C++, Python, MATLAB, $\LaTeX$ , Markdown
<b>Tools &amp; Libraries</b>	PyTorch, Scikit-Learn, DGL, OpenCV, CVX, Pystan