Wenjun Liu

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Education

2022- **Ph.D. Computer Science**, *Dartmouth College*

2018-2022 **B.A. Computer Science & Mathematics**, *Mount Holyoke College*
Cumulative GPA: 3.794, Received in May 2022.

Projects

2023 **Analyzing and predicting people's thoughts and emotions when watching a movie**, *Dartmouth MachineLearning Lab*
Worked with Prof. Souyoung Jin from Dartmouth CS on a dataset of a person's brain activity responses while watching videos

2022 **Analyzing mobile sensing data for student mental health**, *Dartmouth HealthX Lab*
Worked with Prof. Andrew Campbell from Dartmouth CS on a 4-year long dataset of behavioural and EMA data. Produced figures based on analysis across all individuals and in different years.

2022 **Real-time muscle fatigue sensing with wearable device**, *UCLA HCI Lab*
Worked with Prof. Yang Zhang from UCLA ECE on evaluating muscle usage and fatigue caused by repeated body movements. Integrated real time sensing and analysis on an upper extremity digital twin with the physical simulation engine MuJoCo.

2021-2022 **Real time force estimation for Raven surgical robots**, *Independent Studies*
Worked with Prof. Melody Su at MHC on the application of machine learning algorithms on surgical robot. Proposed a novel algorithm for force picture estimation based on 3-D scene reconstruction using image data.

2020 **Improvement in conversation coherency of encoder-decoder based chatbots**, *NLP Class Project*
Worked with another student on algorithms of encoder-decoder model for chatbots. Used Tensorflow to implement a hidden-state model for helping chatbot remember information from previous turns to improve coherency of conversation with human subjects.

Publication & Talk

2023 **Wenjun Liu, Subigya Nepal and Andrew Campbell**, *The College Years and COVID-19: A Longitudinal Study of Undergraduates using Mobile Sensing*, working in progress

2021 **Wenjun Liu, Anna Pickett, Kevin Huang and Yun-Hsuan Su**, *Camera Configuration Models for Machine Vision Based Force Estimation in Robot-Assisted Soft Body Manipulation*, ISMR 2022

Experience

2020-2022 **Research on Computer Vision w/ Prof. Melody Su**, *MHC*
Helped developed a real-time computer vision algorithm to process time series data from surgical robot. Improved the accuracy of force estimation by 35% compared to base line model. Currently working on integration of other sensor data to improve time and computation efficiency.

2019-2022 **Teaching Assistant at MHC Computer Science**, *MHC*
Worked as TA funded by the MaGE peer mentoring program sponsored by Google.

Honors

2022 **Magna Cum Laude**, *MHC*

2018 **Merrill Prize-Freshman English**, *MHC*

Classes TAed

Dartmouth College	Multirobot Systems, Network Science and Complex Systems, Software Design
MHC	Data Structures, Algorithms