

Yiyang Xu

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EDUCATION

University of Illinois Urbana-Champaign Champaign, IL	Sep 2023 - Present
Professional Master of Computer Science	GPA: 3.83/ 4.00
Case Western Reserve University Cleveland, OH	Sep 2019 - May 2023
Bachelor of Sciences in Electrical Engineering (Dean's List) Minor in Computer Science	GPA: 3.90/ 4.00

Related Courses

- Computer Vision
- Database Systems
- Introduction to Data Mining
- Applied Machine Learning

RESEARCH EXPERIENCE

Research Assistant , <i>Department of Biomedical Engineering, Case Western Reserve University</i>	Jan 2021 - Feb 2022
<ul style="list-style-type: none">Implemented data augmentation techniques for less labelled voice data in a voice screening system project, improving model accuracy (75.8% -> 93.4%) in a challenging low-resource environment. Utilized pitch modification, noise addition, and speed variation to enrich training datasets, demonstrating proficiency in Python and TensorFlow.Incorporated Facebook's "wav2vec 2.0 model" using transfer learning to classify speech samples into healthy and pathological categories and improved accuracy (86.2% -> 91.2%) and F1 score (0.76 -> 0.8616)	
Research Assistant , <i>Department of Physics, Case Western Reserve University</i>	Oct 2021 - Feb 2022
<ul style="list-style-type: none">Conducted data preprocessing on scanned images of cancer cells, identifying and annotating pixel bright spots using Python and data analysis libraries including pandas, scikit-learn, etc.	

PROJECT HIGHLIGHTS

Project 1: Large Language Model Text Summarizer Application Developer	Apr 2024 - Present
<ul style="list-style-type: none">Developed a text summarization app using React and OpenAI API, specifically integrating the GPT-3.5-turbo model, allowing users to condense large scale text into shorter, more manageable format. [DEMO]	
Project 2: Full Stack Patients Symptom Management Application	Sep 2023 - Dec 2023
<ul style="list-style-type: none">Utilized MySQL WorkBench and backend framework Flask to design and implement a robust database to store patient-related information and symptom data.Used React to implement an intuitive front-end website that was connected to the database and met patients' basic requirements, which enables efficient management of patient symptoms database.Eliminates noise and outlier data with robust least squares, improved the performance by 25.4%, and reduced the cost of data management progress by 31.9%. [Website]	
Project 3: Domain Adaptation for Visual Emotion Classification	March 2024 - May 2024
<ul style="list-style-type: none">Implemented a machine learning model for facial emotion detection with a new Circular-Structured Emotion Label, leading to a novel loss calculation and top model loss performance (0.226) compared to other state-of-the-art methods.Applied domain adaptation technique using DANN model with pretrained ResNet50 architecture, improving the model classification accuracy (36.48% -> 67.48%) [Code]	

WORK EXPERIENCE

Computational Analyst Internship , <i>Bitfari Foundation Inc.</i>	Jan 2022 - May 2022
<ul style="list-style-type: none">Used Created visually engaging dashboards with Tableau to help improve the marketing department's proportional strategies, resulting in attracting 19% more new users for the company.	

SKILL

Java, R, MySQL, MongoDB, Flask, Python, React, HTML, CSS, JavaScript, LLMs, git, Data Mining, Google Cloud Platform