

# Wilhen Alberto Hui Mei

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## Education

### University of Massachusetts Boston

May 2024

Computer Science – Bachelor of Science

GPA: 3.9 | Honors College | Alpha Lambda Delta Honor Society | Dean's List

**Relevant Coursework:** Artificial Intelligence, Data Science, Software Engineering, Graphics, Probability & Statistics.

**Certificates:** NASA MITTIC Certificate, Python for Data Science, Build a ML Model, Build Deep Learning Models with TensorFlow, BI Dashboards with Tableau, Learn SQL, 2023 Leadership Academy Certificate of Achievement, CareerSafe for IT.

## Skills

**Programming:** Python (scikit-learn, Keras, NumPy, pandas, Matplotlib, Streamlit), Java (Spring Boot), Go, C.

**Web Development:** JavaScript (WebGL, Three.js, XTK.js), HTML, CSS.

**Database:** SQL, MySQL.

**Technologies:** Jupyter Notebook/Lab, Google Colab, Microsoft Office, Visual Studio Code, Git/GitHub, JetBrains IDEs, WinSCP, LaTeX, VMWare.

**Languages:** Fluent in Spanish, Chinese (Cantonese), and proficient in French.

## Work Experience

### Sloan Research Fellow | Python – scikit-learn & Keras | University of Massachusetts Boston

Jun 2023 – Present

- Commit to mentored research experience in Professor Funda Durupinar Babur's VR lab on extracting facial landmarks relevant to personality and using these to animate the faces of 3D virtual characters.
- Automate OpenFace's FaceLandmarkVidMulti software to process 6,000 videos, extracting eye gaze and head/neck rotation data. This led to the merging of results into a unified .csv file, optimizing data preparation for model training.
- Improve from a Recurrent Neural Network (RNN) to a Convolutional Neural Network (CNN) for analyzing attention patterns linked to the Big Five personality traits (OCEAN), resulting in a significant 75% decrease in mean-squared error (MSE), indicating improved accuracy in predicting personality trait scores.

## Projects

### Deep Learning Projects | Python – scikit-learn & Keras

Dec 2023 - Jan 2024

- Implemented a series of Deep Learning projects using TensorFlow, including convolutional neural networks for medical image analysis, classifiers for patient survival prediction, regressors for life expectancy forecasting, etc.

### NASA MITTIC | Johnson Space Center, TX

Aug 2023 – Dec 2023

- Selected as a team of six to represent UMass Boston in the competition, featuring 10 teams nationwide.
- Collaborated in researching from 300+ available NASA patents to design Sentinel, a tool to reduce time consumption in crime scene investigations. Explored tool capabilities and design, AI/ML applications, financial planning, market analysis, competitor analysis, and business timeline.
- Presented findings and project solutions to 200+ individuals on stage, receiving positive feedback from judges.

### Personal Portfolio and Bible Quiz | HTML, CSS, and JavaScript

Jun 2023

- Created a personal portfolio website to showcase my projects and skills, using GitHub pages to host the website.
- Designed a Bible quiz website to learn more about front-end development and engage users in learning.

### Neural Network Training with Keras | Python – scikit-learn & Keras

May 2023

- Trained a neural network on 4000 train samples and 1000 test samples using Keras to evaluate collaborative performance among 20 chefs.
- Utilized a Sequential model to specify our neural network, training the model with 200 epochs and a batch size of 32.
- Achieved a prediction accuracy of 72% on test data and 68% on training data, while providing metric reporting of tasks completion and monetary gains/losses assessment.

## Involvement

### Staff Member | Computer Science Club | University of Massachusetts Boston

Jan 2022 – Present

- Contributed to organizing hackathons while leading workshops on foundational machine learning concepts and guiding participants in building regression and classification models using scikit-learn.
- Assisted in planning club activities to share information about career paths and networking opportunities.