

Hui Xian Grace Lim

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EDUCATION

Rhodes College

B.S. in Computer Science, B.S. in Physics

GPA: 4.00 majors, 3.99 overall

Honors: Honor Roll (2019-2021), Merit Scholarship: Dean's Fellowship (2019-2022),
Sigma Pi Sigma Membership (November 2022)

Memphis, TN

May 2023

University of Central Florida

Ph.D. in Computer Science

Honors: Graduate Trustees Doctoral Fellowship

Orlando, FL

Expected graduation May 2028

WORK EXPERIENCE

Department of Physics, Rhodes College

Peer Tutor

- Worked individually with 5+ students in weekly tutoring sessions
- Lead exam study sessions and assisted students in test corrections
- Built up students' confidence in applying introductory physics concepts

Memphis, TN

Fall 2022, Spring 2023

Teaching Assistant

- Explained and clarified lab instructions and problems as needed
- Reviewed answers for accuracy and helped students understand difficult concepts
- Maintained and operated 8-inch Celestron Telescopes
- Set up and organized Introductory Physics and Astronomy lab equipment

Fall 2021, Fall 2022

Student Researcher

- Developed software for spectroscopic imaging of quasar hosts with a PSF decomposition and spectral analysis package in a JWST Early Release Science program
- Refactored, debugged, and updated IDL software into Python to be compatible with the JWST

Summers 2020, 2021

Department of Computer Science, Rhodes College

Student Researcher

- Reviewed papers on proposed genome sequencing methods
- Used deNovo assembly on mitochondrial genomes and low-coverage, whole genome sequences using the Lotus HPC cluster.

Memphis, TN

Spring 2021

CAMP Lab, Clemson University

NSF REU Intern

- Designed virtual character gesture perception experiments using Unity, Maya, and Blender to animate 3D models with various hand motion conditions.
- Ran experiments in VR in person and through Mechanical Turk, made a technical report and poster on the findings to present to other colleagues.

Clemson, SC

Summer 2022

Center for Integrated Mobility Sciences, NREL

SULI Intern

- Developed and implemented a classifier-agnostic method to estimate the uncertainty of phone-sensor mode predictions in python.
- Ran experiments with large datasets using Docker and python to test uncertainty-estimation methods, submitted a paper to the TRB 2024 annual meeting, and made a poster on the results to present to other colleagues.

Remote

Summer 2023

CLASS PROJECTS

Source available upon request and on GitHub

- LISP Parser and Interpreter implemented in ML
- Drawing Program
 - Implemented brushes and image filters through kernel masking.
- Connect Four
 - Connect Four against a computer using the minimax algorithm, alpha-beta pruning, or alpha-beta pruning with a heuristic.
- Factorial Seven Segment Display implemented in Nios ISA assembly
- Spam Classifier using a Naive Bayes classifier

PUBLICATIONS AND PRESENTATIONS

Count Multivariate Metrics: Estimate Mode Count and Distance Uncertainty from Phone Sensors

Transportation Research Board Annual Meeting 2024, Under Review

August 2023

The Perception of Hand Gestures in Conversational Virtual Characters

Undergraduate Research Symposium, Clemson University

Clemson, SC

July 2022

Quasar Observations with the James Webb Space Telescope

Conference for Undergraduate Women in Physics, American Physics Society

Virtual

January 2022

Collaborative Coding for Quasar Observations with the James Webb Space Telescope

Rhodes Symposium, Rhodes College

Memphis, TN

April 2021

SKILLS

- Programming languages: Python, HTML, CSS, Java, C++, C#, C, IDL, R, ML, JavaScript
- Tools and environments: Mathematica, Microsoft Office, GitHub, Weka, Unity, Maya, Blender, bash shell, Docker, RStudio, Jupyter Notebooks, VSCode