

# Irene Wang

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## EDUCATION

**Rice University**, *Houston, TX.*

May 2025

Bachelor of Arts in Computer Science and Visual Arts

**GPA:** 3.69 / 4.0

**Relevant Coursework:** Computational Thinking, Multivariable Calculus, Algorithmic Thinking, Linear Algebra, Introduction to Programming Design, Reasoning About Algorithms, Probability & Statistics

## SKILLS

- Python, Photoshop, Procreate, Java

## RESEARCH EXPERIENCE

**Genome Sleuths Research Intern** | Treangen Lab, Rice University, Houston, TX

May 2022 - August 2022

- Reduced the memory consumption by 40% of the program Emu, a relative abundance estimator for 16S genomic sequences
- Enhanced the data structures of Emu, which previously used dictionaries to store logarithmic calculations, to use numpy arrays and their built in arithmetic operations
- Reduced the runtime for creating a custom lineage database by over 60% by removing data storage bottlenecks caused by Pandas Dataframes and adjusting and implementing existing and new code
- Developed functions that parsed SILVA specific files, allowing Emu to be compatible with the SILVA database, a ribosomal RNA database
- Researched the Expectation-Maximization algorithm to learn how to integrate new changes to Emu

## PROJECTS

**Game** | Personal Project

August 2022—September 2022

- Developed a pixel style platform game using Python and PyGame
- Formulated a game point system that allows the player to interact with stars, that are randomly generated as the player progresses, to collect points
- Configured game engine physics to have gravity allowing for fluid movement of the player's character from platform to platform, game ending is triggered when the player falls off the screen
- Illustrated all graphics using Photoshop and Procreate

**Crochet Helper** | Personal Project

July 2022

- Built a PC application that assists crochet artists in managing resources by using Python and PySimpleGui
- Implemented a calculator that allows the user to accurately calculate the amount of yarn they will need for a crochet pattern project
- Developed a load/save feature for users stitch counts, storing the stitch data in a JSON format

## EXPERIENCES

**Treasurer** | Rice Art Club, Rice University

October 2021—Present

- Coordinated a comics workshop led by a Rice professor and published comic artist for 10 club members
- Organized and budgeted the club funds and gathered crafting materials for club meetings
- Created graphics to post on social media and around campus to advertise the club, reaching over 200 students
- Previously served as the Co-Head of Marketing for 2 semesters

**Cookie Run Breakout Zine Co-Organizer/Illustrator**

January 2019—September 2019

- Directed a digital zine with 30 artists that raised \$200 for the United Way of Genesee Flint Water Fund
- Pioneered social media platforms by posting and illustrating graphics made with Photoshop, accumulated 250 followers by the end of the project
- Recruited various online artists to participate and oversaw all project deadlines