Gabriel Sison

Personal Website | gabrielarceo0183@gmail.com | linkedin.com/in/gabrielsison | github.com/Gabriel-Sison

Education

University of Washington Seattle — **Seattle, WA**

B.S. in Computer Science — *Expected Graduation Date: June 2025*

- **Courses:** Object-Oriented Programming, System and Software Tools, Data Structures and Parallelism, Discrete Math
- **Languages:** Python, Java, MatLab, HTML/CSS, C
- **Awards:** NASA Space Grant Studentship, Martin Family Foundation Honors Scholar

Experience

Java Game Engine — **Seattle, WA**

Software Engineer — *Sept 2023 – Present*

- Used **JavaFX** to help develop with a team of **10** a Java game engine, featuring games such as Pacman and Angry Birds
- Integrated tabular design for game launch through implementation of **2** tabs for Map Writing and Game Settings, allowing **user interactivity** such as changing of properties (such as character speed) and creation of personalized maps
- Added 3 sliders that export game setting values towards file used for launch

TakeOnCollege — **Seattle, WA**

Data Analyst — *Aug 2022 – Present*

- Created a **Python-based** data analysis framework to examine survey data from **280+** college applications from **50+** mentees throughout **2** years for data analytics committee of college mentorship nonprofit
- Identified a **15% higher** college acceptance rate among TOC mentees compared with national average acceptance rates
- Streamlined organization-wide logistics for **master document**, showing acceptance rates, organization feedback, and student demographics for entire organization since 2021

Highline College — **Des Moines, WA**

Hackathon Organizer — *Dec 2022 - Feb 2023*

- Developed **7** coding prompts in Java and **10** input/output files for coding competition, ranging from topics such as **2D arrays**, **recursion**, **file processing**, and **method calls**
- Collaborated in team with **3** other leaders to help handle logistics, food, and room registration, pulling off our schools first ever post-pandemic in-person coding competition with 25+ participants

University of Washington Nance Lab — **Seattle, WA**

Research Participant — *June 2022 – Aug 2022*

- Analyzed brain cell images with **data science** and **image processing** using data from the University of Washington Chemical Engineering department for a selective **10**-week summer program
- Learned introductory **Python** (NumPy, Pandas, SciPy, Scikit-Image, SKLearn) and **Data Science** (Image Processing, Data Management, Machine Learning)
- Applied **image processing** and **machine learning** techniques to fluorescent brain cell images from research papers

Personal Projects

Fractal Generator | ***Java, Swing, JFrame***

- Designed **graphical user interface** in Java that processed real-time updates to generate and display fractals up to a **recursion depth of 8** layers, resulting in the generation of up to **3280 fractal components**
- Implemented an **Observer design pattern**, using components such as **2 slider**s for recursion depth and color opacity, **1 color menu**, and **1 theme menu** for increased interactivity, utilizing JPanel, JFrame, and Swing

Personal Librarian | ***Java***

- Converted pre-built **Java** SearchTree class into a TreeMap class with **2** generics instead of **1**, which allowed for the tracking of Book information solely through ISBN
- Utilized **recursion** to navigate through **binary search tree** of **9300+** book options, reducing redundant traversals

Weather Manager | ***Java***

- Set up Weather Manager that processed **CSV** file with **1 million** rows of weather data and applied natural ordering by country, state, city, year, month, and day
- Integrated **binary search** algorithm to increase computational efficiency from **O(n) to O(log n)**
- Constructed function to calculate **linear regression** of certain cities over specific time spans