

Mia Kelley-Lanser

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EDUCATION

Clark University, Worcester, MA

Expected Graduation: December 2025

Bachelor of Arts in Computer Science; **Bachelor of Arts** in Interactive Media, Game Development and Programming Track

Cumulative GPA: 4.0

RELATED COURSES

Clark University: Algorithms, Automata Theory, Intro to Discrete Structures, Game Studio, Game Programming with Data Structures

Bunker Hill Community College: Advanced C++/OOP, C++ Programming, Java Programming, Python Programming, Intro to Comp Sci/OOP, Game Development Essentials

Bard College at Simon's Rock: Cryptography, Intro to Computer Science

SKILLS and AWARDS

Languages: C++, C#, Java, JavaScript, Python

PC Software: Unity, Qt Creator

Dean's List Clark University: First Honors Fall 2023, First Honors Spring 2024

Dean's List Bard College at Simon's Rock: Spring 2022

Merit List Bunker Hill Community College: Fall 2022, Spring 2023

Member of Phi Theta Kappa Honor Society and The National Society of Leadership and Success

PROFESSIONAL EXPERIENCE

Research Assistant

May 2024 - Present

Clark University Computer Science Department, Worcester, MA

- Work under Dr. Lewis Tseng, gathering and graphing data on the throughput and latency of distributed systems
- Automating testing and graphing processes to further enable data collection

Game Master

July 2022 - Present

PuzzlEscape, Hudson, MA

- Guiding groups through escape rooms, providing apt and timely hints, operating software to run the rooms, troubleshooting real-time technical issues, and ensuring a challenging and rewarding experience for every player
- Contributing to narrative and puzzle design, as well as construction of new rooms

Peer Learning Assistant

January 2024 - May 2024

Clark University Computer Science Department, Worcester, MA

- Served as a peer learning assistant for Intro to Discrete Structures, hosting TA hours twice a week to provide support for students as they tackled challenging material
- Corrected and wrote comments on turned-in student assignments to assist in the grading process, leaving detailed explanations where students made mistakes or missed a step to help increase their understanding

Mentee

January 2023

Try AI, Cambridge, MA

- Researched how to optimize flight paths for unmanned aerial vehicles (UAVs) to estimate animal density, culminating in a presentation detailing the significance of the study for wildlife

conservation, the limitations of existing work, and high-level models both for how to predict the density of wildlife in particular regions and how to determine the most effective and efficient way to survey a region with a UAV of limited battery life

- Outcomes of the research included increased knowledge and understanding of regression models and their benefits and drawbacks, growth in ability to devise an algorithm to solve a discrete problem with limitations, and experience in technical research within the field of AI

PROJECTS

Comparing the Efficiency of RSA and ElGamal: A Performance Analysis of Two Similarly Secure, Asymmetric Cryptosystems

- An implementation and runtime comparison of the cryptosystems RSA and ElGamal, investigating whether RSA is favored in industry due to greater efficiency. Implementation is provided in both Java and C++, using one non-compiled and one compiled language to produce and compare runtime data for each cryptosystem.
- The study and implementation was a semester-long final group project that I lead for my Algorithms course at Clark University. The project, including documentation, can be found on GitHub at: <https://github.com/TenzinSommer/CSCI-160-Final-Project/tree/main>

Finance Tracker

- An application for MacOS devices for keeping track of income and expenses in an organized environment with graphing capabilities to help visualize the rate of finance flow. After registering, any data added will be saved automatically upon logout so that one can return to it at any time. Features include creating data entries with customizable categories and subcategories to organize data, the option to delete existing entries, the ability to display all data or only data in a particular category, and the ability to graph all, or by category, income and expenses over time.
- The project was written in C++ and created using Qt Creator. The assignment was a semester-long project for my Advanced C++ course at Bunker Hill Community College. The project, including documentation, can be found on my GitHub at: <https://github.com/MiaKL/Finance-Tracker>

Balloon Tower Defense Game

- A game based on Ninja Kiwi's *Bloons Tower Defense*, the goal is to place towers to pop the invading balloons. Difficulty increases as balloons of different colors appear, such as blue balloons which contain red balloons inside them and therefore need to be popped twice. A twist is added to the original game with two-player mode, allowing friends to compete for points from popping balloons while sharing the same number of lives.
- The project was written in JavaScript and can be found at: <https://editor.p5js.org/MiaKL/sketches/XJIH0tdt4>. Click the play button in the top right corner to run the code.