# Mia Kelley-Lanser

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About Me: https://miakl.github.io/index.html

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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, AI for Games, Software Engineering, Assembly Language and Computer Organization, Analysis of Programming Language, Intro to Discrete Structures, Game Studio, Game Programming with Data Structures, Human Computer Interaction
**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, Unreal, GitHub, Plastic, Jira, Qt Creator
**Dean's List, First Honors** Clark University: Fall 2023, Spring 2024, Fall 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

**Peer Learning Assistant**                                        **January 2024 - Present**
Clark University Computer Science Department, Worcester, MA
- Serving as a peer learning assistant for Intro to Discrete Structures, hosting TA hours weekly to provide support for students as they tackle challenging material
- Correcting and providing feedback 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

**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

**Research Assistant**                                        **May 2024 - August 2024**
Clark University Computer Science Department, Worcester, MA
- Worked under Dr. Lewis Tseng, gathering and graphing data on the throughput and latency of distributed systems
- Automated testing and graphing processes to further enable data collection

- Thoroughly documented how to run tests and graph results using the automated testing processes for future users and developers

**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**

**Zombie Game Demo**
- A demo zombie-style melee game showcasing NPC AI programming. Systems implemented include senses for the zombie enemies such as sight and hearing, states with transitions based on these senses and dynamic randomization factors, and a messaging system.
- The project was written in C# and created in Unity. The assignment was a solo final project and the culmination of a semester's work in my AI for Games course at Clark University. A development commentary and demo video of the game providing some insight into my design process and implementation can be found at: **https://drive.google.com/file/d/1jUestmc7ryD3ibuuG4_jAmtkBpfcJDi9/view?usp=sharing**

**VR Human Benchmark Tests**
- A VR hub with human benchmark tests, allowing users to gauge their cognitive capabilities in areas such as reaction speed and memory in the immersive world of VR. Current tests include a basic reaction speed test and a Simon puzzle. Additional features include score-saving, username input for score organization, and score view sorting by highest, lowest, and most recent scores.
- The project was written in C# and created in Unity. The assignment was a semester-long, two-person project for my Software Engineering course at Clark University. The project, including documentation, can be found on GitHub at: **https://github.com/RobertMa123/VRHBCSCI250/tree/EndOfSemesterVersion**