

# KAYLE HEIDEMAN

GAMEPLAY PROGRAMMER  
+ GAME DESIGNER

## CONTACT



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github.com/KBHeid



SLC, Utah

## EDUCATION

### University of Utah

Master's of Entertainment  
Arts and Engineering -  
2021-2023

### Buena Vista University

B.S. Computer Science  
2017-2020

## LANGUAGES AND TOOLS

C • C++ • C# • Html/Css •  
JavaScript • Lua • Python •  
SQL • Unreal Blueprints

Git • JetBrains IDEs •  
Linux • Perforce • Svn •  
Unity • Unreal Engine 4 •  
Visual Studios

## OTHER EXPERIENCE

Buena Vista CTF Code  
Contributor 2021

Stine Grant 2020

Startup Grant 2019

## PROJECTS

**Game Engine (2022)** - A simple 2d game engine written in C++ that utilized the Entity Component System framework and featured physics, rendering, collision, dynamic frame timing and more.

**Ancient Artifacts (2022)** - A board game that I developed, prototyped, play-tested and had professionally printed. This was meant to be my personal culmination of learned game design skills.

**Battle Bard (2022)** - An alternate control game wherein the player must hit drums attached to their body to perform combos and inspire their troops. I worked as the sole engineer for the prototype, creating all the prototype systems from the ground up. Our game advanced and our team grew, which allowed me to focus on a more fully-fledged combo system and metronome.

**Memory Management System (2021)** - A system for dynamic memory management without the overhead cost of default new and delete operators in C++. Implemented with industry standards and featured aligned addresses and safeguards.

**I.T.O.M (2020)** - Item Trading over an Online Marketplace was my undergrad capstone. It featured a front-end website to facilitate trades between players, a game-end handler to support game-specific code, a backend RESTful API to interact with the front-end and custom network protocol to interact with game-end handlers, and a database to store serialized game item data.

**Stream Processing Engine (2019)** - A framework for processing endless amounts of data on-the-fly (such as stock ticker or temperature data points). Developed as a research project, implemented in C++.

## WORK EXPERIENCE

### Test Engineer - Collins Aerospace

Jul. 2021-Present

Developed and ran regression testing and took over as sole developer for an automation framework.

### 2Fix Lead Technical Assistant - Buena Vista University - Oct. 2018-May 2020

Managed a team of other technical assistants, creating schedules and assisting in IT desk help when needed.