

# Chris Huval

Senior Software Engineer

## Work Experience

### Maximum Entertainment — *Technical Director*

September 2023 - Present

[https://store.steampowered.com/app/1959140/Diesel\\_Legacy\\_The\\_Brazen\\_Age/](https://store.steampowered.com/app/1959140/Diesel_Legacy_The_Brazen_Age/)

- Avatar: The Last Airbender & Diesel Legacy: The Brazen Age – Fighting games for Switch, PS5, Xbox and PC (in development)
- Lead efforts to expand Abare (underlying game engine) and assist in porting to consoles.
- **Creating tools** for other engineers, designers and artists
- Expanded the Abare script compiler and virtual machine:
  - Debugger with breakpoints, stack traces, inspections
  - Custom variable declaration
  - Built IDE via vscode extension (SptStudio)
  - Advanced flow control: for loops, iterators
- Added dozens of new features to Abare engine from scratch, including:
  - **Animation and keyframe editor**
  - **Realtime font rendering** using signed distance fields
  - Multithreaded logging framework
  - Improved level editor
  - Virtual file system
  - Localization backend
  - **UDP reliability layer**
  - **Build server integration** and headless mode
  - Unit testing suite to run as part of a CI pipeline

### Mane6, Inc. — *Lead Engineer*

September 2016 - 2023

[https://store.steampowered.com/app/574980/Thems\\_Fightin\\_Herds/](https://store.steampowered.com/app/574980/Thems_Fightin_Herds/)

- Lead engineer on Them's Fightin' Herds – Fighting game for Switch, PS5, Xbox and PC (Released 1.0 2020)
- **Full stack** development for game client and complex lobby servers
- Architected and wrote or rewrote nearly all game features
- Heavily modified and expanded Lab Zero's Skullgirls Engine
- **EOS, steam integration**, New visual lobby system, **server infrastructure, matchmaking**, tutorial mode, story mode, new AI for arcade mode, **UI system**, dynamic music system, character mechanics
- Created content authoring tools for artists and designers
- Managed testing and release of all builds

### Bounce Software LLC — *Software Engineer/Quality Assurance*

March 2015 - November 2016

- Developed, tested software for businesses in Northern Colorado
- Created and executed testing policies for large projects near release
- Full Stack web development using Java, GWT and SQL

## Key Skills & Experience

- **Full stack** game development
- Building game engines used in commercial games and modifying existing ones
- Strong in **Epic Online Services**, experience with Playfab
- Building content creation tools
- Extremely strong C++
- **C#, JS** and Lua
- Extensive **UI programming**
- Multiplayer networking
- Netcode (p2p, server/client, rollback)
- Matchmaking systems
- Some console experience with **Nintendo Switch**
- **Multiplayer servers**
- Good experience in **Unity**
- Some experience in Unreal
- AI programming (behavior trees, prediction, learning models)
- Graphics engineering and optimization
- Practical Artificial Intelligence
- Build servers

## EDUCATION

### Colorado State University — *Bachelors of Science (2014)*

Major: Computer Science

Minor: Mathematics