Game Project report

As a machine learning engineer, I have never programmed interactive applications, so it was a whole new world for me. It was fun, but I got carried away as I implemented the following features:

- Collision-based platforms (the game does not have the floor level and any need for "canyons" anymore)

- 2 soundtrack files and 13 sound effects used in different scenarios

- Enemy steps are louder the closer they are to the character

- An enemy skeleton with an aggro mechanic

- Hitbox-based melee combat with knockback

- Animation management, an animated knight character and an enemy skeleton

- Double jump as a power-up

- Background parallax

- Spikes instead of canyons

- Pogoing off of the spikes and enemies by performing a downward attack

- Deactivating certain spikes after a certain event happens (I hope you find the game fun enough to find out yourself what it is)

- Vertical scrolling

- Checkpoints

- debug modes (try `debugMode = true` and `debugView = true` in the console)

- probably something else I forgot to mention

So, this project is heavily inspired by Hollow Knight, but it lacks a boss battle. There is some code for it present, but I decided to scrap it.

Things I found difficult:

- box2d collision led me to rewrite the project from scratch

- animation management, particularly flipping the sprites and cutting

- Picking the right assets - they have a tremendous impact on the feel of the game

- The closer I was to the deadline, the more technical debt I have accumulated

- I wanted to apply heavy postprocessing with blurring and tinting, but JS is not cut for that. I didn't have the time to learn shaders, too bad.

All the assets are sourced for free from itch.io.

I practiced building an application from start to finish instead of implementing one juicy bit. I also used class inheritance a lot. Mastering the sound effects and creating a more or less harmonious look took some effort. Praise the free assets!