**Project Proposal**

**Project Description:**

Beat Crusher is the name of the project. It is pseudo-VR rhythm drumming game where the goal is to use real world objects as drumming sticks to accurately hit objects as they come at you to the beat of the song.

**Competitive Analysis:**

My main inspiration for this project came from [here](https://www.youtube.com/watch?v=RjHvfmKpxdg&ab_channel=AndrewZ). It and many other VR rhythm games (Beat saber, Smash drums, etc) share many characteristics of my project. They all are rhythm games and use real world objects to interact with a virtual space. My project is unique in the sense that it uses a camera instead of virtual reality devices and the main aspect is playing the drums. I have not seen any kind of project like this at the time of writing this.

**Structural Plan:**

My project will utilize a standard folder and file system. Each feature of project will have its own python file contain any methods, classes it needs to function independently. The main python file will combine and run all of these files to complete the project. I will additionally have a resource folder that contains any images, songs, or outside file I may need.

**Version Control:**

I am utilizing git to keep track of different versions and states of my project

A screenshot of a computer

Description automatically generated with medium confidence

Algorithmic Plan

* Beat parser:
  + Reads in a text CVS file of midi content and events
  + Parses for useful information (time of event, type of instrument, track number)
  + Organizes information in a beat map list

**UPDATE DESIGN**

* REMOVED calibration aspect in favor of two color (Red/blue) stick detection. Calibration is unnecessary with this change.
* IMPLEMENTED beat map parser that takes in a text file of midi events and extracts necessary information such as type of instruments, time of execution, etc.