Release Plan

Universal Audio Visualizer - UAV - 4 - 04/16/22

**High Level Goals:**

* Visualize audio into unique and random patterns
* Have the ability to customize the generation of the patterns
* Be able to select audio source

**Sprint 1:**

1. As a user I want to automatically pull audio from windows. (2 Points)
2. As a user, I want to see shapes based off of the audio playing. (5 Points)
3. As a user I want to be able to choose an application to visualize. (5 Points)

Spike:

* Learn about Opengl or Vulkan
* Learn Qt to make a gui
* Learning about *GetBuffer* and *ReleaseBuffer*
* Researching about Detours
* Setting up the framework
* How to interpret audio data and turn them into images
* How to make different shapes

**Sprint 2:**

1. As a user I want to select which output (speaker/headphones) to use so that I can customize my experience. (2 Points)
2. As a user, I want the volume of the audio playing to determine how patterns are generated. (3 Points)
3. As a user, I want the shapes to have depth and look 3D. (2 Points)
4. As a user I want different colors depending on the tempo of the song. (5 Points)
5. As a user I want different presets for generation of patterns. (2 Points)

Spike:

* How to enhance the images to look 3D
* Figure out how to determine tempo of song

**Sprint 3:**

1. As a user, I want to be able to select the intensity of the patterns created. (2 Points)
2. As a user I want patterns made based on the rhythm, bass, or various other elements of music. (3 Points)
3. As a user, I want to be able to edit the presets. (2 Points)

Spike:

* Creating an interactactable interface to change the values that control the intensity of patterns
* Developing an algorithm that creates patterns based off of audio data

**Sprint 4:**

1. As a user, I want the shapes to pulse with the beat of the music. (2 Points)
2. As a user, I want to choose what shapes are generated. (1 Point)
3. As a user I want to be able to save user-created presets. (1 Point)

Spike:

* How format to save user saved presets
* How to interpret sound sound as a beat and an animation to show

**Product Backlog:**

Visualize multiple applications at once.