**Release Summary**

**Product Name: BeatBox**

07/23/23

**Key user stories and acceptance criteria**:

**1. Play Button and Stop Button**: As a musician, I want to make a drum beat using one instrument channel and play it back, so I can make a basic rhythm. (Priority: High) (Story Points: 8)

**Acceptance Criteria:**

1. BeatBox has an instrument channel button with 8 note buttons adjacent to the channel button, and a play and stop button for pattern playback
2. Instrument channel has a default sound
3. Note buttons can be toggled on or off
4. Pressing the play button plays the drum pattern at default tempo (120 bpm) and pressing the stop button stops playback
5. Note buttons should flash a different color during playback

**2. Tempo Button**: As a musician, I want to change the tempo so I can create rhythms at different speeds. (Priority: High) (Story Points: 5)

**Acceptance Criteria:**

1. User can click on the button and update the tempo value
2. The tempo value corresponds to the playback speed of the drum pattern

**3. Instrument Channel Play Button**: As a musician, I want to play an instrument channel’s sound so that I can hear the sample being used. (Priority: High) (Story Points: 3)

**Acceptance Criteria:**

1. Play button in the instrument channel plays the default sound

**4. Upload Button**: As a musician, I want to upload my own sounds so I can use instruments that match my ideas better than the default instruments. (Priority: High) (Story Points: 8)

**Acceptance Criteria:**

1. When clicked, the Upload Button (within the purple instrument channel) will prompt the user to select an audio file from their local system to upload to the instrument channel - replacing the instrument channel’s default sound with the user’s audio file.
2. Audio files accepted criteria: audio files must be wav or mp3 format, 2 seconds in length max, 1 MB max in file size.
3. File uploads outside the range of accepted files will open a small pop-up window with the text “File must be ‘wav’ or ‘mp3’ format, up to 2 seconds long, and up to 1 MB in size!” - “OK” button for upload error pop-up window closes when clicked or keys “Enter” or “Esc” are pressed.

**5. Volume Knob**: As a musician, I want to change the volume of certain sounds so all the different sounds are balanced with each other. (Priority: High) (Story Points: 5)

**Acceptance Criteria:**

1. Clicking the Volume button in the purple instrument channel generates a pop-up window where the user can adjust the instrument channel volume.
2. Volume default is set to 100. If the user double clicks the volume button, it resets to 100. If the user inputs an invalid value, the volume resets to 100.

**6. Download Button**: As a musician, I want to download my drum loop so I can use it in a real song. (Priority: High) (Story Points: 8)

**Acceptance Criteria:**

1. Clicking the Download Button will prompt the user to enter a filename and a save location on their system
2. The audio is then recorded for one loop and a rendered lossless wav file is then downloaded to the user’s system.

**7. Mute Button**: As a musician, I want to mute sounds so I can focus on certain sections of my drum pattern at a time. (Priority: High) (Story Points: 3)

**Acceptance Criteria:**

1. Clicking the Mute Button will set the current instrument channel’s volume to zero
2. Disabling the mute button will return the instrument channel’s volume to its previous value.

**8. 8 Channels**: As a musician, I want to use up to 8 instrument channels so I can make more complex rhythms. (Priority: High) (Story Points: 5)

**Acceptance Criteria:**

1. All 8 channels should play/stop at the same time
2. All 8 channels must be included in recordings
3. All 8 channels have independent controls (volume, panning, instrument soundbyte, mute) that do not interfere with each other

**9. Solo Button**: As a musician, I want to solo certain sounds so that I can see how one specific channel sounds clearly. (Priority: Medium) (Story Points: 5)

**Acceptance Criteria:**

1. Mutes all other instruments
2. Unmutes the instrument playing if it is muted
3. Solo button lights up on the playing instrument to indicate it is active
4. Saves mute status of all instruments before soloing and restores mutes afterwards
5. User can switch between soloing different instruments without actively disabling soloing on a previous instrument

**10. Snapshot Download**: As a musician, I want to download a “snapshot” of my drum pattern that I can re-upload and continue editing later so I can make quick and easy changes. (Priority: High) (Story Points: 13)

**Acceptance Criteria:**

1. User can download a file containing all the session’s settings
2. User can upload a file with saved presets ( and restore the previous session)
3. A popup error is displayed if the file cannot be successfully loaded (note: does not overwrite the current session if the load fails)

**11. Panning Knob**: As a musician, I want to change the panning of certain sounds so I can use spatial positioning to make the soundstage more immersive. (Priority: High) (Story Points: 5)

**Acceptance Criteria:**

1. Clicking and dragging the Panning Knob in the purple instrument channel changes the audio of the instrument between the left and right speaker output (easiest to distinguish with headphones). Default value is 0, and can range from -100 (pan to left speaker), to 100 (pan to right speaker)
2. Mousing over the Panning Knob displays the current panning amount, and is displayed while user is changing panning value
3. Double-clicking the Panning Knob resets the panning back to 0

**Known Problems:**

**Major bugs:**

1.Product is only compatible with Google Chrome - audio playback and recording is not fully functional in other browsers.

2.Obscure bug where you can play a muted instrument using a certain combination of mute and solo button presses.

3. Uploading a sound longer than our specified limits on instrument channel 6 will cause an alert() box to appear in a loop for around a minute until it finally disappears.

4. Tempo doesn’t always update immediately, sometimes requires that it is entered more than once.

**Product Backlog:**

* + **Snapshot Account**: As a musician, I want to log in and save snapshots of my drum pattern and sounds to my account so I can conveniently look at and edit all my drum patterns. (Priority: High) (Story Points: TBA)
  + **Advanced Presets**: As a musician, I want the option to create beats with different numbers of beats (more or less than 8 beats), and create beats with different time signatures (3/4, 5/4, etc.)
  + **Record Sample**: Upload audio into instrument channel via mic recording.
  + Resolve mute and solo button conflict described above.