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| **BUSINESS CASE** | |
| **Proposed Project** | Our goal is to create a machine learning algorithm which can recommend tracks to mix, which are complementary with each-other. Additionally, we would like to provide search/filter functionality. |
| **Date Produced** | 22/11/2020 |
| **Background** | DJs and casual hobbyists keep a list of tracks to mix. From their tastes and through reading the room, they mix tracks accordingly. Our goal is to provide a utility, which recommends pieces which may streamline a DJ's workflow. For performers, this would be a realtime utility, which would assist them as they sifted through their track list. It would also help aspiring mixers build out their library. We will do this through machine learning algorithms and general search criteria. In a way, we will be programming 'taste' into a utility. Our algorithm must learn what works, in order to aid the DJ and possibly eliminate options. This will make a DJ's final say easier. |
| **Business Need/ Opportunity** | As stated in our golden circle, this would aid hobbyists and performers, while maintaining a level of needed oversight to ensure quality. If an algorithm can predict complementary tracks. This could provide users with inspiration, or solutions to those with less musical familiarity or means. |
| **Options** | There are various techniques we may use in regards to our machine learning. while we believe a recommender system will work best - it is important to observe & test many possible models/solutions.  We may also vary our types of input. For now, we will accept a limited number of features or songs as input. As well as a limited number of criteria/ |
| **Cost-Benefit Analysis** | |
| There are a wide range of datasets available for free use. However, if we aim to provide downloadable/playback copies of a result - we must consider the licencing/copyright of the artist’s work. It may be wise to instead link to spotify search results. Further, storing a dataset will require the need for a database and its associated backend. While we could build one from scratch, we will likely use a service like aws. While we can keep to a free tier, we may need to purchase resources. Luckily, we may be able to avoid paying for a dns by using amplify. Finally, costs might also include. Services like Jira and Stories on Board may also incur various fees. | |
| **Recommendation** | |
| recommend going with AWS and avoiding unnecessary resource expenditure. Further investigation on the chosen dataset’s distribution must be done. | |