**Contribution Memo – Alex Koener**

I would first like to thank Dr. Hagan for organizing an amazing team, we produced a project that I’m very pleased with and am proud of each of my team member’s work. I would also like thank my team for all the effort they put into this project, they demonstrated true teamwork, perseverance, and work ethic; without them this project would have been a mere fraction of what it came to be.

I volunteered for, and then was nominated to take on the responsibility of the team lead position for our team. My responsibility as the team lead was to simply make sure all the moving parts of this project came together, and the final product was something that we could all be proud of.

My first mission as the team lead was to figure out each member’s strengths so everyone’s best skills could be allocated appropriately. I was gifted folks with great coding skills (Efrain), awesome communication/language skills (Darius and Ryan), and impactful visualization skills (Victoria); even those these were their strong points, everyone was involved with each step of the project and helped immensely. Throughout the project, I made sure to check in and help anywhere we needed extra support.

As a team member, I first explored the SpotifyR package with my team members to understand what the best data for the project would be and discovered the genres of music, playlists within those genres, and each playlist’s variables including track name, and artist name. Once I found these pieces, Efrain did an amazing job of creating our cleaning/extraction function (playlist\_to\_df) that pulled this data and put it into our own organized data frames and used another package to obtain the lyrics (Genius package).

Next, I began to work with Victoria so we could conduct our sentiment analysis of each playlist, and she developed a function that cleaned the data and made it ready for tokenization (mrClean). I used that cleaning function to make another function that used the Spotify lyrics, cleaned them, tokenized them, and conducted the sentiment analysis for that playlist (get\_sentiment\_data).

From here, my team members are solely responsible for the visualizations; Victoria coded the framework, and Ryan/Darius aided with the final touches to make our results pop and made sense.

Throughout this journey, Ryan and Daruis were in charge of our communications including proposals, papers written, and final presentation. They did an amazing job organizing our key points and being able to communicate those ideas to Dr. Hagan and classmates. This work was so important, and I thank you both dearly for this contribution.

Everyone in our team helped in many different ways (more that I could cover in this memo) and I want to make it clear that my **team** are the reason that we made it this far and accomplished the goal we were trying to achieve with this project and understand popular music sentiment. They deserve the recognition and have a special place in my heart, I’m excited to work with everyone in the future and cannot wait to cross paths again.