**\*Please make a copy of this document and include this in your GitHub repository for your submission, using the tag #AndroidDevChallenge\***

**Tell us what your idea is.**

*Describe in 250 words what the feature or service will do and how you’ll use Machine Learning to push the bar: -*

*The main idea of the feature is to separate the callers voice from the background noises in the case of incoming calls to facilitate disturbance- free communication. In case of an incoming voice call the received sound is basically a mixture of callers voice and any background sounds (unwanted or wanted). The feature will enable the user i.e., the receiver of the call here, to communicate seamlessly by separating the callers voice from the unwanted background disturbances. The cocktail party effect is the well known phenomenon that explains this process. With the use of appropriate algorithm to suppress the background non-human noises and as well as maintain a low latency can allow us to take full advantage of the feature without any overheads of the processing involved. Even with the latest microphones with improved noise cancellation background noises are added into to speech sound that hinder clear listening. With this, on –device real- time feature better results can be achieved. The application of this feature can both simpler and significant, simpler by providing the user a clear day-to-day voice communication and significant in some important situations where clarity of communication can be most important.*

**Tell us how you plan on bringing it to life.**

*Describe where your project is, how you could use Google’s help in the endeavor, and how you plan on using On-Device ML technology to bring the concept to life. The best submissions have a great idea combined with a concrete path of where you plan on going, which should include:*

* *(1) any potential sample code you’ve already written,*
* *(2) a list of the ways you could use Google’s help,*
* *(3) as well as the timeline on how you plan on bringing it to life by May 1, 2020.*

*A overall timeline that would be as follows:-*

* *Developing an noise suppression algorithm with and testing it with real-time audio to check its latency.*
* *Developing a widget app that can work with other caller applications and get the incoming call to go through its background service where the noise suppress processing will occur.*

*Google Help in the following tasks:-*

* *Require help with the implementation of a fast performing algorithms.*
* *Allow to integrate this feature to Google dialer app, and make this feature its public or private API, like Smart Compose.*

**Tell us about you.**

A great idea is just one part of the equation; we also want to learn a bit more about you. Share with us some of your other projects so we can get an idea of how we can assist you with your project.

**Next steps.**

* Be sure to include this cover letter in your GitHub repository
* Your GitHub repository should be tagged #AndroidDevChallenge
* Don’t forget to include other items in your GitHub repository to help us evaluate your submission; you can include prior projects you've worked on, sample code you've already built for this project, or anything else you think could be helpful in evaluating your concept and your ability to build it
* [**The final step is to fill out this form to officially submit your proposal.**](https://docs.google.com/forms/d/e/1FAIpQLSe43koQL33IzgxXQl29Ex3AhFuqd4hQzxLiXREqwRkDGtx1vA/viewform?usp=sf_link)