**\*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:*

Well, it is a simple program to identify a person by using his or her voice before he or she open their file. So, actually it is a kind of authentication procedure to secure data privacy so not everybody can open it. I will use machine learning to learn how to identify a specific person by considering their accent, pitch, and timbre. Each person must have their identical voice that is unique.

This program will be applied to file system and then, when someone wants to open their file, they need to record their voice about 5 seconds to be processed by the machine, but before they can use this program, they need to register their voice to be the data set for the machine so the program could recognize their voice.

Actually I just learn about Artificial Intelligence about 4 months ago, and this idea is my assignment. I have searched for many references on the internet and I could only found a fact that deep learning is the best choice for this problem, but I cannot create the app using deep learning. So, I tried to search for source code on the internet and I found the way how to identify a specific person using Gaussian Mixture Model but the source code cannot provide my target so I modified the code. I can only get 85% accuracy and it was still be able to misrecognize about 25%. I can only recognize the voice by using its volume and frequency.

**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,*

Python script to authenticate someone’s voice by using Gaussian Mixture Model Method

* *(2) a list of the ways you could use Google’s help,*
* I need Google provide voice data set to train the machine
* I need Google provide technical expertise and technical guidance to help me complete my project
* I could use Google’s tool to process the voice and implement the program to Android
* I could use Google’s tool in machine learning to develop the program
* *(3) as well as the timeline on how you plan on bringing it to life by May 1, 2020.*
* December 2019 - January 2020 : Study more about machine learning in voice authentication
* February 2020 – April 2020 : Develop the program

**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.

I am a college student in Indonesia, I got scholarship from BCA (Bank Central Asia) for Computer Science program. I just created some mini projects to fulfill my assignment. They were game and they were written by using C and Java. My last project was about voice authentication using Gaussian Mixture Model and it was written by using Python. I am inexperienced in android programming, all my projects were desktop application.

**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)