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:

What happens when you have a headache? Usually you just ignore it, at some point you decide to go and see a doctor. You make an appointment, get to hospital, wait for your turn and finally find yourself in front of a doctor. You tell her about your problem, she asks you some questions, makes remarks and sends you to make some test. The decision that doctor made is typical case of machine learning: If a patient has this problem -> ask an appropriate questions to make a picture clear -> send him to make test -> check a result -> start a treatment. We want your phone to perform these firs steps, we want your phone to become this "first line" doctor. Every time you have an headache, you make a remark in the app. App is recording what the weather was at that moment, your EKG and all the parameters it can get. Then it's analysing all this data, asks appropriate questions to make a picture clear -> sends you to make test -> gets your results and send you to a doctor to get a deeper research of the problem with all the data you have already. It's a win-win situation for you and a doctor. Doctor saves her time on performing this first steps, you save time collecting all those data in your phone. You get your personal doctor helper right in your pocket. All the data is stored locally at your device and all the learnings are happing locally on your device.

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.*

For bringing this to life I finished a ML course from Microsoft and Google's Machine Learning Crash Course. As an iOS developer I was planing to do an app for iOS, but found out about this challenge and decided to try to deliver it for an Android. My plan is to start with only one but a very common case: headache. It happens to everyone and depends on many factors. So the plan would look like:

1. **Create an app that will store all the data from user locally December - January 2020**

2. **Work closely with a doctor to fill out all the questions and parameters the app need to collect from an user January 2020**
3. **Get sample data snd medical records to train ML February 2020**
4. **Start training the model (with a help of the doctor) March 2020**
5. **Running test with first users: (friends, family members) calibrating model. April 2020**
6. **Release app: 1 May 2020.**

I see Google can help me with collecting medical records for training a ML model on it. I also expect Google to have an experienced ML engineers and mentors that could help me with training the model.

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'm an iOS engineer with 5y of experience that launched some startups previously. For almost 1 year I started courses in AI and ML. I did some research and work of live object and motion detection in sport videos. I believe modern mobile devices are capable to process some of the AI tasks locally. Since phones are becoming to be used on daily basis more often than pc, are way more mobile and always accessible by hand — I see them as a perfect AI assistant. Transferring some of AI tasks (that are now done mostly in a cloud) to local devices gives us benefit in privacy (which is one of the hottest topics in 2019) and independence from internet connection or cloud solutions.

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.**