**\*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:*

Do you know how many illiterate people there are in the world?

* 775 million adults

Do you know how many people own a mobile device?

* More than 5 billion people

And there is a big overlap between those two groups: a lot of illiterate or low-literate people make use of a (smart) phone.

How do they make use of their phones?

* By speech recognition and by making use of emojis

And those emojis are the basis for the feature we want to develop. Predictive text is already available for years. We want to make it possible to make predictive emojis as well. Not emojis that are predicted based on your writing (that already exists), but emojis based on the sequences of other emojis, based on your past conversations and/or based on the time of day for example. We will use Machine Learning to make those predictions and suggestions. So for example: based on history a user would get a food emoji after he types a clock emoji during dinner time.

**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.*

1. Code can be found in GitHub
2. It would be great if we could receive a database with chats, preferably chats written by low-iterates, or at least with a lot of emoji’s. And it would be extra great if we could also receive some algorithms that are used for predictive text.
3. We can make use of existing projects, like DeepMoji: <https://github.com/bfelbo/DeepMoji>  
   Steps to be taken before May 1, 2020:

* Collection of data
* Analyse data
* Optional: annotate data, if emoticons are not annotated yet
* Find patterns using deep learning frameworks as TensorFlow and PyTorch
* Implementation
* Testing

**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.

Anneleen Schoen (32): a philosopher and linguist turned into a software developer. I work for a financial institution since 4 years. As a frontend I worked on a message service and a file share module for private banking clients.

**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)