

The Meeting Notes for FYP

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Team Member:

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Topic: The electrocardiogram (ECG) based biometric identification

Subtitle: We are handling deep learning based living personal identification

Discussion summary

1. Introducing the basic knowledge of electrocardiogram (ECG).
2. Introducing the advantage of living personal identification by using ECG technique and comparing the other methods
(Other personal identification methods like fingerprint, human face, iris, ...)
3. Introducing the deep learning model
We need to find and try a suitable model for the project. Such as TensorFlow version of SCNN, ...or another CNN library. In addition, the model should be for one-dimensional signal.
4. In our project, we needed to implement one-to-one recognition and group recognition.
 1. One-to-one recognition: to check this heartbeat is this person or not individually. Just check this one ECG is this person or not.
 2. Group recognition: to check whether a person's heartbeat is this one of the ECG group (maybe 10 people in a group)
5. Introducing Physionet.org (the ECG database). We recommended to use these databases:
 1. ECG-ID database
 2. PTB Diagnostic ECG

Next meeting targets

1. Finding some materials related to ECG and try to get rid of it.
2. Get rid of ECG related Database (Physionet.org)
3. Get rid of the ECG Deep Learning Model (TensorFlow)
4. TO-DO: thinking/finding about any devices/instruments are suitable for the developing and demonstrating of this project.

Literature survey

N/A in this time