Fingerprint detection

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Project plan

Our dataset is the Soco finger dataset with 6000 fingerprint images , from 600 subjects. There are 10 fingerprints per subject.(Original paper of the dataset) What is our plans?:

We would like to develop 3 models for detect the following things(if we have time we would like to merge these three models into one model to calculate these 3 things simultaneously).:

- Fingerprint recognition: Categorize fingerprints that they identity is between the list of acceptable persons or not.
- Gender predicting: Decide that the finger belong to a male of a female
- Finger detection: Decide which finger is which finger (thumb, index, middle, ring, little)

Milestones

- 1. Preparing and understand the data and data structure, and creating the right model, or find some pretrained model what can be fine tuneable for out task. (-2024 Nov 01)
- 2. Choose the model(s) and train, and comparing them, displaying some demo version (2024 Nov 02- 2024 Dec 01)
- 3. Test the models and find the best one
- 4. Show the final version (2025 Jan)