Tech Stack

Subject to change

<u>A very helpful link</u>

Front end (if we get to the point of making it an online hosted application)

<u>Flask</u> for website

- flask is very easy to get started and as we wont put all the focus on a website, something simple that gets the job done is exactly what we need

<u>Anvil</u> is another viable option

- web based IDE
- create UI with drag and drop
- can run python in browser & on the server
- has built in database

Backend

<u>OpenCV</u> for computer vision

- has functionality like:
    - image processing
    - image file reading and writing
    - video analysis, object detection
    - deep NN module
    - machine learning
    - feature detection and description

- - face analysis

  - tracking API

  - and more

TensorFlow for training

- compatible with OpenCV

- works well with python and google cloud

PyTorch for training

- compatible with OpenCV

May not use MongoDB (Google Cloud is better suited)

MongoDB for storing training data

- The dataset that we are using is very large and cannot be easily downloaded

- storing the data in a database that can be accessed for our application is ideal

GoogleCloud

- can store any type of data

- retrieveable whenever

- $300 in free credits

- compatible with tensorflow