Can you train a model to recognize you better than it recognizes a celebrity?

Imagine taking a couple photos of yourself or your friends and training an ML model to pick you out from a huge celebrity dataset. It sounds pretty fun but it also teaches you how real facial recognition technology (FRT) works and where it fails. In this case study you will get to build something that reacts to your own images and is able to decipher between different people.

You will start by gathering your own images and creating a dataset. Next, you will follow a clear process to clean the data (your images as well as celebrity dataset), prepare it for modelling, and train a convolutional neural network that learns to tell your group apart from celebrities. The goal is to recreate the type of system that many companies use today, but in a simpler and more interesting way that lets you understand the process.

Your job is to produce a working model that can correctly identify whether an input image belongs to you or belongs to someone else. You will explore how image quality, lighting, representation, and sampling affect model performance.

By the end you will have built a tool that learns real facial features and gives you a deeper understanding of how modern image models behave. It is a great intro to computer vision, machine learning, and model evaluation, and most importantly, it gives you something super cool to show other people.

Here is the link to the GitHub repository where you can find all the materials you need: https://github.com/atharvgupta29/CNN