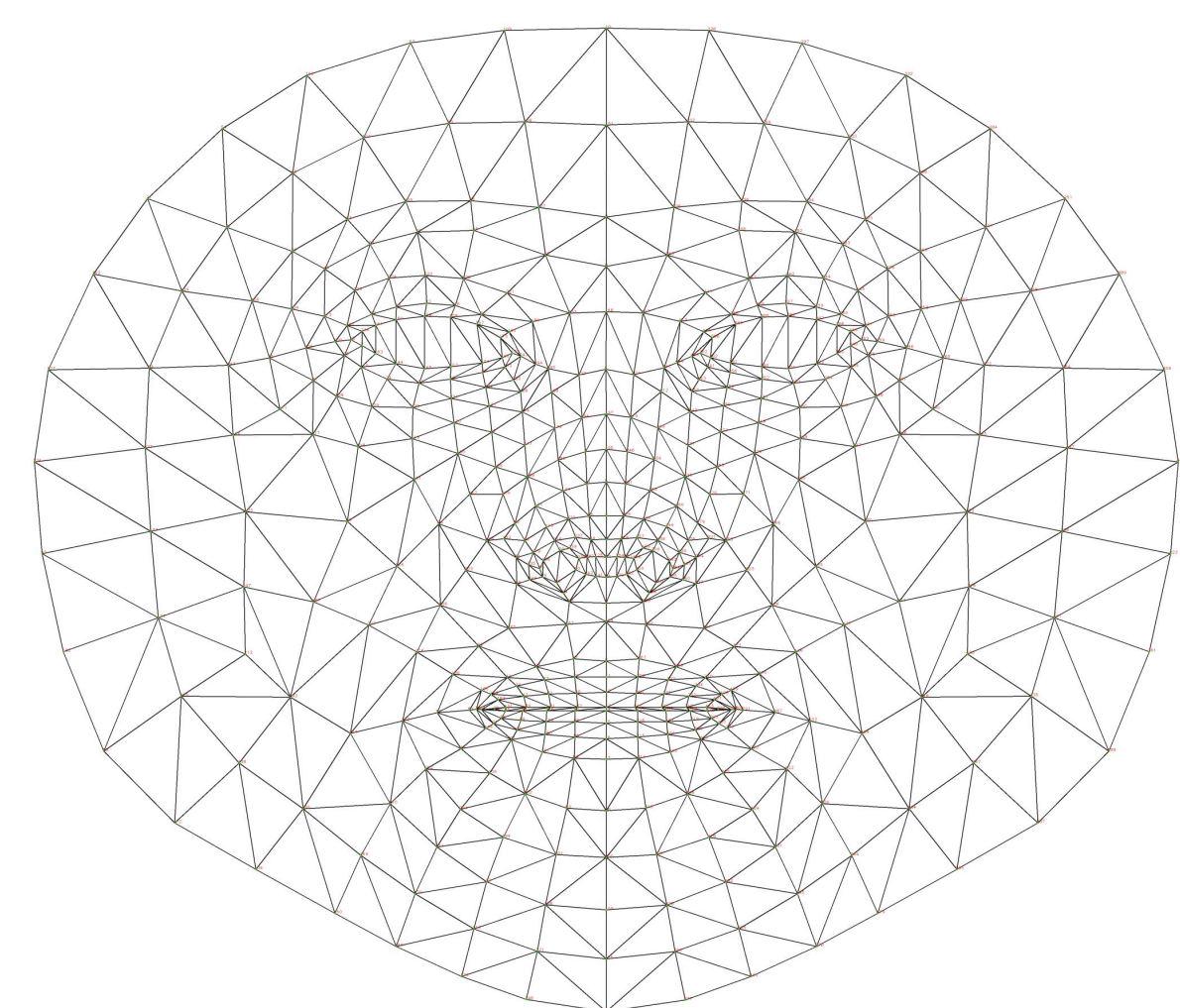


## App Introduction

We created an app where barbers can easily advertise their business and attract clients. BarberRater is a cross-platform application available for the web, Android, and iOS. Clients can upload their picture and allow the app to run an algorithm to detect the users face shape and recommend an appropriate hairstyle.

Whether you are looking for the best barber in town, or want a hairstyle specifically designed for you, BarberRater got you covered!

## Mediapipe Face Mesh



- Used to determine face shape
- 450+ vertexes
  - Only 19 are needed

Common face shapes:

|       |        |      |           |       |      |         |        |
|-------|--------|------|-----------|-------|------|---------|--------|
| Heart | Square | Pear | Rectangle | Round | Oval | Diamond | Oblong |
|       |        |      |           |       |      |         |        |

## Team

**Edgar - Flutter App**  
**Alonso - Django/Database**  
**Juan - Face Shape Algorithm**

## How Does it Work?

BarberRater is made up of two parts...

### Front-End

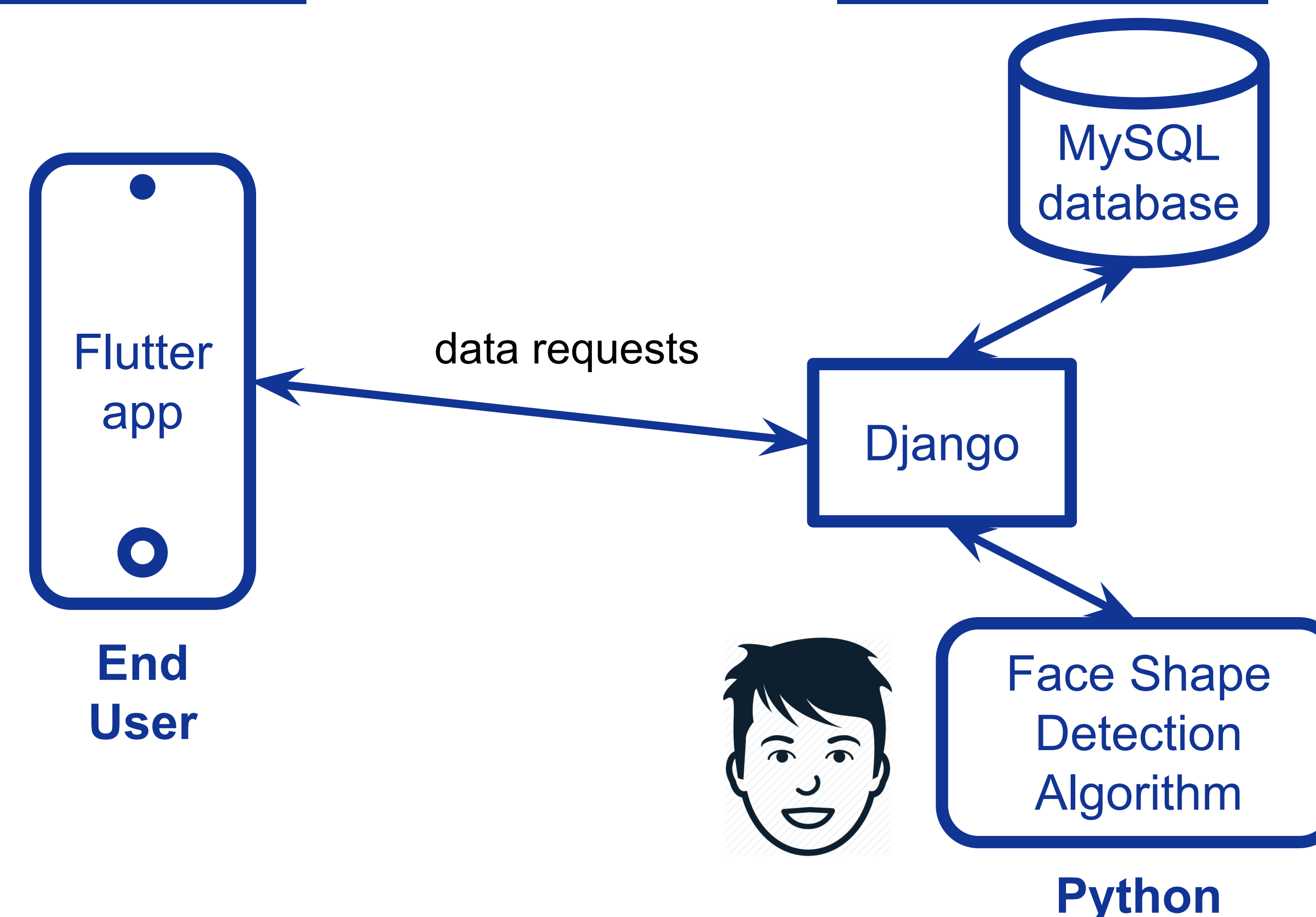
- Flutter
  - Flutter builds the visual part of BarberRater and is what makes the interaction between the user and the program possible.
  - Allows the user to take photos and send it to the server

### Server

- Django
  - Uses the Python programming language
  - Queries the mySQL database for data to reply to data requests from the Flutter app.
  - Django gives face photos to the face shape detection algorithm
- Face Shape Algorithm
  - Receives a face photo from Django
  - Determines face shape and sends a hairstyle back to Django

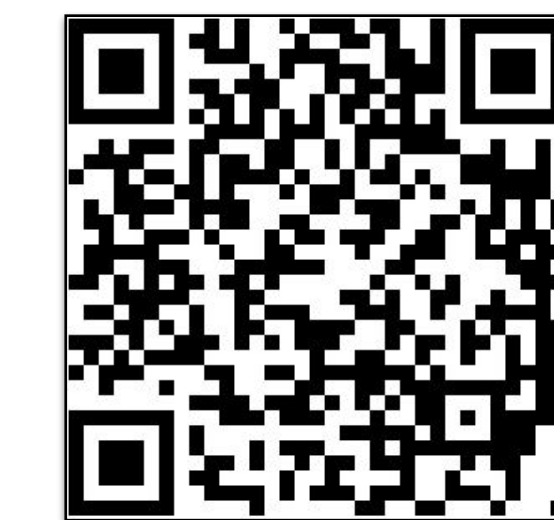
### Front-end

### NGINX Server



## Let our AI choose your hairstyle!

Our app features an AI algorithm that can choose a hairstyle that best fits you!



### The Algorithm

- The algorithm is a program built using the Python programming language.
  - Trained with thousands of photos.
  - Data was extracted from these photos.
  - The data is used to make prediction.
- It was built using Mediapipe, a Python tool, as the backbone to process images and help in detecting face shape.
- Once a face shape has been identified, the algorithm will tell our app the user's hairstyle that best suits the determined face shape.
- Using this technology makes BarberRater different from the rest of the market.

### Technologies

We used various technologies to build BarberRater.

