



/FotoFaces

Licenciatura em Engenharia Informática
Projeto de Informática
Grupo 01





/Team



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Advisors



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/01 → /Context

Being able to identify someone by their face is globally used in normal day life, but when we try and categorise people in a certain company, or enterprise, it is not always easy. Inserting a photo anywhere is not the main problem, but assuring that when updating it with a new photo, it's valid and usable can get tricky. Therefore, the search for a way to upload new photos and validate it with new/better algorithms that prevent any backlash is highly requested.

/02 → /Problem



Our project will consist of a mobile application that sends a photo to an API which will respond with characteristics of that photo (Ex.: Has a face, has glasses...) and, according to the response message, the mobile app will check if it's valid and update it to the database.

/03 → /Goals



- Facial Recognition functionalities
- Improve existing algorithms in FotoFaces
- Add algorithms to FotoFaces to improve the reliability of the Facial Recognition
- Implement deep learning to make the FotoFaces algorithms more reliable

/04 → /Risks

- Modularization Problems
- Performance and Efficiency of the algorithms
- Bad implementation of deep learning



/05 → /Expected_Results

- Fully functional mobile app with FotoFaces integration
- Reliable Facial Recognition
- Robust backend capable of scaling



/06



/Related_Work

Blur detection with OpenCV



Liveness detection

Building our liveness detection image dataset

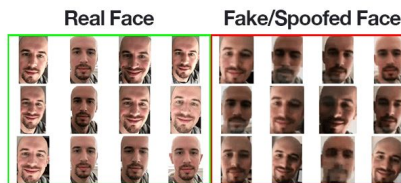
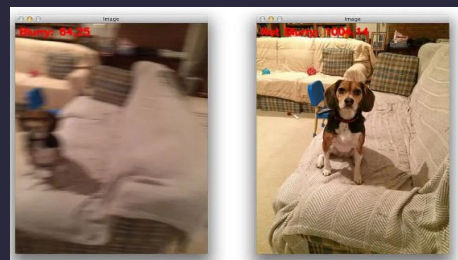


Figure 4: Our OpenCV face liveness detection dataset. We'll use Keras and OpenCV to train and demo a liveness model.

Realtime glasses detection



/07 —→ **/Architecture**



/08 → /Roles

/Filipe	/Gonçalo	/João	/Pedro	/Vicente
Team Manager	DevOps	FrontEnd Quality Team	Quality Manager	Architect

/09 → /Tasks

/Filipe	/Gonçalo	/João	/Pedro	/Vicente
Organise the team and generate backlog	Operate and do maintenance for the project repository	Design the aesthetic of the project	Manage software quality among all algorithms	Design the Architecture of the project
Maintain a good project documentation for posteriori	Make sure the project runs everywhere	Manage software quality among all algorithms	Organise the tasks for the Quality Team	Maintain and upgrade the architecture when needed
Developer	Developer	Developer	Developer	Developer

/10 → /Communication_Plan



Backlog
management



Website

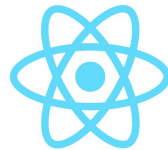


Development
Community

/11 → **/Development_Tools**



Code Repository



App Builder



Communication

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