Filipe
Monteiro

DATE OF BIRTH:
15/05/1988

CONTACT

Nationality: Portuguese

Gender: Male

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ABOUT ME

I am a problem solver developer. Vast experience in programming, can adapt to any type of problem, in my carreer I did Web, Mobile Apps, different types of Desktop development, programmed for embedded devices, but now in love with Machine Learning and Computer Vision.

WORK EXPERIENCE

01/09/2019 – CURRENT – Porto, Portugal

Machine Learning Engineer
Polygon

Polygon is a company that develops solutions for remote authentication (with liveness) and customer onboarding.

My job was to improve ID Card Validation and OCR process, using machine learning. Main tasks:

- Developing deep learning based module to detect and rotate a card in a given image
- Developing deep learning based module to distinguish between a photo of a portuguese ID and a photo of a printed portuguese ID, as well as from a photo of a photo of a portuguese ID (photo from computer screen for example).
- Developing a deep learning based module to do card segmentation of portuguese ID cards
- Developing a deep learning based mofule to detect ID card security elements, for fraud check.

Previously I was continuing HealthyRoad project (Computer Vision in Driver Monitoring System).

https://polygon.pt/ | Porto, Portugal

01/11/2013 – 31/10/2019

CTO and Co-Founder
HealthyRoad

HealthyRoad is a company that develops innovative products that allow to solve real problems through the most advanced biometric analysis technologies based on a camera.

As Chief Technology Officer, I am responsible for all the development of the projects created in HealthyRoad.

HealthyDrive: Development of an application to detect and prevent drowsiness and fatigue in a person with real-time video processing. C++ application using OpenCV in embedded Linux (Odroid in the past, and now NVIDIA Jetson).

HealthySecurity: Development of an application for monitoring security guards. C++ Desktop application using Qt and OpenCV in Windows that:

- Recognizes the security guard (to unlock the computer);
- Detects if he leaves the station (locking the PC);
- Detects if he is inactive for a defined period of time;
- Detects if he fall asleep;
- Create reports with the work statistics of the security guards.

HealthyRoad SDK: Creation of a library that wraps all the biometric functionalities developed at HealthyRoad:

- Drowsiness and Fatigue Detection;
- Stress Quantification;
- Emotions Classification;
- Facial Identification;
- Vital Signs Measurement (HeartBeat).

www.healthyroad.pt | Porto, Portugal

07/2018 – CURRENT – Porto, Portugal

● **Full Stack Engineer and Co-Founder**
Happies

Happies is a mobile app for speech therapy for children, to use along with their speech therapist or parent.

By containing a series of exercises, children can train their orofacial motricity anywhere in a fun way! It also keeps a record on when they exercise, and how good is their evolution.

Technologies used:

 - react-native (javascript)

 - realm

https://happies.pt/

03/2017 – CURRENT

● **Outdoor activities coordinator**
ALINHAS?

ALINHAS? is a Non Governamental Organization, focused on the organization of sport activities without profit as well as paid team building activities for companies or groups of people.
As an Activities Coordinator, I am one of the responsible for the creation and management of these activities (volunteer job).

In terms of sport, we do Surf, Canyoning, Traditional games, Rock Climbing, between other activities.

Matosinhos, Portugal

14/11/2011 – 31/10/2012

- **Developer**

  FreedomGrow

  Development of a web application for monitoring wireless sensor networks.

  Technologies used:

    - C# ASP.NET
    - Microsoft SqlServer

  Professional, scientific and technical activities ｜ Matosinhos, Portugal

EDUCATION AND TRAINING

04/2016 – 09/2016 – Amsterdam, Netherlands

Web & Mobile Accelerator

Rockstart

Web & Mobile workshops

Entrepreneurship experience

03/04/2013 – 03/10/2013 – Porto, Portugal

Startup acceleration program

UPTEC

Entrepreneurship training

01/10/2012 – 01/10/2013 – Porto, Portugal

Masters in Biomedical Engineering

Faculty of Engineering of University of Porto

The goal was to expand the knowledge obtained in Programming and Electrical Engineering to the health and medicine scope.

Had subjects such as nanomedicine, tissue regeneration, rehabilitation engineering and bioinformatics.

10/2011 – 25/01/2012 – Pedrouços - Maia

Pedagogical Competencies Certificate

WPM

Certificate n.º F587560/2012

Field(s) of study
  - Teacher training and education science

4,72 val (in 5)

09/2006 – 07/2011 – Rua do Doutor Roberto Frias, Porto, Portugal

Master in Electrical and Computer Engineering

Faculty of Engineering of Porto University

Programming, Advance Mathematics, Electronics, Physics

Field(s) of study
  - Engineering

15 out of 20 (B)

LANGUAGE SKILLS

MOTHER TONGUE(S): Portuguese

English

Listening	Reading	Spoken production	Spoken interaction	Writing
B2	**B2**	**B2**	**B2**	**B2**

French

Listening	Reading	Spoken production	Spoken interaction	Writing
A2	**A2**	**A1**	**A1**	**A2**

Spanish

Listening	Reading	Spoken production	Spoken interaction	Writing
A2	**A2**	**A1**	**A1**	**A2**

DRIVING LICENCE

Driving Licence: **A1** / Driving Licence: **A** / Driving Licence: **B** / Driving Licence: **B1**

PROJECTS

Projects

Porto city council funded project - Desafios Porto (Oporto Challenges) - Mobility Area (2016)

Project "Eyeparking" - Monitoring of car parking spots with CCTV cameras.

European funded project - P2020 (2016)

Project for monitoring old people at their houses with security cameras.

HONOURS AND AWARDS

● **Honours and awards**
Prize "Software do Ano 2015" (Software of the year) given by Exame Informática

ORGANISATIONAL SKILLS

● **Organisational skills**

Through my experience as CTO and by leading the developers team at HealthyRoad, I gained:

- Sense of Organization
- Ability to manage projects and teams
- Leadership and team spirit skills
- Proactivity

COMMUNICATION AND INTERPERSONAL SKILLS

● **Communication and interpersonal skills**

- Presentation skills (portuguese and english) gained with the several pitches made through my experience as CTO@HealthyRoad.
- Communication and social skills boosted through my volunteer position at ALINHAS?.

JOB-RELATED SKILLS

Job-related skills

- Problem Solver
- Great knowledge in Computer Vision and Artifficial Intelligence (from the 2 engineering courses and from the work experience in HealthyRoad)
- Great knowledge in Deep Learning (acquired during HealthyRoad and mastered now in Polygon)
- Great knowledge in several Programming languages:
- C, C++, C#, Java, Pascal (Delphi), Python, PHP, Javascript and easily adaptable to others;
- Created wrappers of C++ library for use in Delphi, C# and Java.
- Also good experience in Assembly, SFC, Visual Basic.
- Good knowledge in web development: Symfony, ASP.NET, Google App Engine, nodeJS, django, HTML5, CSS3
- Good knowledge in mobile app development: React-Native (Android and iOS), Android with Java.
- Good knowledge in collaborative tools (Atlassian Jira, Git, ...)
- UML knowledge
- Good Knowledges in engineering related software: Matlab, PSIM, MultiSIM, Labview, UnityPro, Lazarus, Visual Studio, Rad Studio (Delphi).
- Good knowledge in Databases (Microsoft SqlServer, MySql, sqlite, mongodb, etc).

OTHER SKILLS

Other skills

Love sports and Adventure.

Great at football! Now in love with padbol

ADVISOR

Advisor

2014:

Fernando Soares - Drowsiness detection in car drivers.

Filipe Osório - Drowsiness detection in security guards.

Rui Stretch - Vital Signs monitor for biometric Systems.

Aleksandra Lukzak - Eye Gaze detection

2015:

João Fonseca - Vital Signs monitor for biometric Systems. 18/20

João Leal - Biometric system for facial recognition. Deep learning, neural networks.

2016:

Vítor Moreira - Face Orientation measurement for distraction detection

Diogo Mesquita - Eye Gaze measurement for distraction detection

Hugo Marinho - Human Emotions Classifier based on Deep Learning

Note: All based in image (aquisition by 1 camera)