Guilherme Mendes

Date of birth: 05/06/2000 | **Nationality:** Portuguese | **Gender:** Male |

Phone number: (+351) 934019454 (Mobile) | **Email address:**

guilhermecostamendes00@gmail.com | **Website:** https://gcmendes22.github.io/ |

LinkedIn: https://www.linkedin.com/in/guilherme-mendes-7847a21a3/ |

Github: https://github.com/gcmendes22 | **Address:** Porto, Portugal (Home)

ABOUT ME

Since my childhood, I have a huge passion for techonology and I entered in the high school, I realized that this is what I wanted to do for the rest of my life.

I consider myself an ambitious person with critical thinking, who likes to work in a team.

I am currently finishing my Master in Electrical and Computer Engineering in the field of "Telecommunications, Electronics and Computers".

I'm always looking for news experiences to increase my knowledge and myself as professional.

WORK EXPERIENCE

18/07/2022 – CURRENT Alfena, Portugal
TEST SYSTEMS ENGINEER / SOFTWARE DEVELOPER CONTROLAR

Software modules development, validation, maintenance and documentation.
Test machine automation engineering.
Test systems architecture.
Knowledge in automotive industry.
Measurement equipments integration.
Dealing with customers and support them.
Machine stations validation and instalation.
Agile Scrum work philosophy.

17/09/2020 – 01/10/2021 Porto, Portugal
PROGRAMMER JUNIFEUP

Software developer. Web, mobile and desktop applications development and maintenance.

EDUCATION AND TRAINING

16/09/2018 – 07/2021 Porto, Portugal
BACHELOR IN ELETRONICS AND COMPUTERS ENGINEERING Faculty of Engineering of the University of Porto

Eletrónica, Microprocessadores e Microcontroladores, Sistemas Digitais, Telecomunicações, Programação, Redes de Computadores

Address R. Dr. Roberto Frias, 4200-465 Porto, 4200-465, Porto, Portugal |

Website https://sigarra.up.pt/feup/pt/cur_geral.cur_view?pv_curso_id=22823&pv_ano_lectivo=2021 |

Field of study Eletroctécnia, Computadores, Informática

17/09/2021 – CURRENT Porto, Portugal
MASTER IN ELETRONICS AND COMPJUTER ENGINEERING Faculty of Engineering of the University of Porto

Address R. Dr. Roberto Frias, 4200-465 Porto, Porto, Portugal |

Website https://sigarra.up.pt/feup/pt/cur_geral.cur_view?pv_curso_id=22806&pv_ano_lectivo=2021

LANGUAGE SKILLS

Mother tongue(s): **PORTUGUESE**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C2	B2	B2	C2
SPANISH	B2	B2	B1	B1	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Agile (scrum)

Programação

C | Git | Python | ReactJS | SQL | C# | MQTT | NodeJS and ExpressJs | REST APIs | Machine learning | Labview | OpenCV | JavaScript | MySQL

Software

EAGLE | Microsoft Office | TestStand | Multisim | Linux | Windows | Wireshark

Protocols

ADDITIONAL INFORMATION

PROJECTS

E-bike Flashing Station Development of a manufacturing firmware flashing station of an entire e-bike controller product assembly line.
- This is the first station of the line, so it was needed to implement the product traceability (serial and traceability numbers management).
- Flashing the firmware using STM-32.
- Functional tests in the PCB.
- The machine consists in a rotatable plate with 2 sides, each one has 4 DUT cells. Those 4 DUTs are tested in paralell.
- Measurement equipment communication. Development of power supplies and DMMs drivers communication.

E-bike EOL 1 (End-of-line) Station Development of a functional test machine of an entire e-bike controller product assembly line.
- Functional tests on the controller buttons. Mechanical fingers pressing each button and test it's functionallity.
- Display vision test. Display patterns detection, display uniformity test, backlight defects, bad-pixels detection in each RGB pattern.
- ALS (Ambient Light Sensor) calibration. ALS calibration using a light source at 1000lx with a luxmeter measurement as reference.
- RTC (Real-time Clock) calibration.
- CAN communication test.
- PCB PT tests.

- The machine consists in a two axis with a unique DUT cell each. DUTs are tested in parallel. The station has three diferents test zones: Buttons Test, Vision Test and ALS Calibration Test. The movement to each zone is made with the axis.
- Measurement equipment communication. Development of power supply, DMM, luxmeter driveres communication.
- Development of cameras communication drivers.

E-bike EOL 2 (End-of-line #2) Station Development of a functional test machine of an entire e-bike controller product assembly line.
- PCB PT tests.
- Subjective and manual buttons tests. Operator click each button, feel the touch and receive the functional feedback.
- Security certificates download to the DUT.
- Final user software upload. Upload of the final user software to the DUT.
- The machine consists in two different DUTs cells tested in parallel.

Automotive ECU EOL (End-of-line) Station Development of a functional tests machine of an automotive ECU and blind plugs placement station.
- NVM manufacturing data writting and reading.
- Analog/Digital inputs/outputs tests.
- Current consumption test
- FAN test.
- Connectivity tests. CAN, LIN, Wifi, Bluetooth.
- Audio and RF Tests. AM, FM, DAB tests.
- Video tests.
- Blind plugs placement station:
    - Vision machine to test the correct placement of each blind plug. Color and position analysis via cameras.
- Machine consists in four different sub-stations with a rotatable plate for the movement to each one. All DUTs are tested in parallel.

Automotive Instrument Cluster EOL Station (End-of-line) Development of machines to test the functionality of instruments clusters.
- Management of differents product variants tests.
- Display vision test. Telltale analysis, color patterns detection, bad-pixels detections. Display uniformity.
- Analog/digital inoputs/outputs tests.
- Touch screen tests.
- Fuel simulation tests.

Station Database Implementation Development of a standard database and it's communication for a test machine stations and processes.
Technologies:
- Python (Flask)
- REST API
- MySQL as SGBD
- MQTT bridge for PLC communication

Data Link Protocol In the scope of the Computer Networks course, I developed and implemented a data layer communication protocol. The data transmission uses an asynchronous serial port, RS-232, as the medium. This protocol must be capable to do frame synchronization, connection establishment and termination, frame numbering, error control and flow control.

Network configuration and development of an FTP download application In the Computer Networks course unit, we set up a small network of some computers in order to be able to run an application capable of downloading files from an FTP server developed by us in C.

Yawn detection system In the scope of the Computer Vision course, my group has been developing a yawn detection scope with image recognition that will detect if the driver is or is not yawing during driving actions.

Song Popularity Prediction In the scope of the Machine Learning course, I develop a software to predict the popularity of a given song by technical details, such as, acousticness, key, feeling transmitted, instrumentalness, title, etc... This datat was provided by various fonts, such as the Spotify API. To carry out this project, Python was used as programming language.

FORMAÇÕES

Google Agile Project Management

Certified training in Agile Project Management guided by Google.
This training covered the values and philosophy of Agile project management, the pillars of Scrum and how they support Scrum values, Scrum events and how to configure them in a Scrum team. Finally, I was taught how to train an Agile team and how to help its members overcome challenges.

Formação Lean Startup

Certified Lean Startup training guided by APGEI (Portuguese Association of Industrial Engineering).
Topics such as Management 3.0 techniques and management of self-motivated teams, development of a business model through the Business Model Canvas and the operation and structure of a Startup were addressed.

EVENTS AND CONTESTS

22/04/2022 – 24/04/2022
Participation in TecStorm 2022

Techstorm is the largest technological marathon that supports youth entrepreneurship and the development of ideas capable of generating an impact on society.

My group's idea fits into the category of "Energy Solutions for a Low Carbon Future" supported by Galp. Our idea was to convert mechanical energy into electrical energy through vibrations.

DRIVING LICENCE

Driving Licence: B

HOBBIES AND INTERESTS

Música - Jazz guitar

Desporto