

JÚLIO MIGUEL BRAZ DA COSTA SILVA

Software Engineer

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📍 Portugal

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Portfolio Link

<https://jmbcs.github.io/portfolio/>

Education

Master in Electronics/Telecommunications Engineering

University of Aveiro

📅 2014 – 2020

📍 Aveiro, Portugal

Thesis - Recovery and Identification of Moments

Grade: 19/20

📅 2019-2020 (1 year)

📍 Aveiro - Portugal

- Development of a python automatic image retrieval system capable of associating images to moments described in text.

Work Experience

Research and Development Engineer (Hybrid)

Wavecom

📅 Jan 2021 – Present Time

📍 Aveiro, Portugal

- End-to-end development lifecycle of a **pioneering product**, from initial ideation and research through to **production**.
- Developed microservices in **Python** and **Golang**.
- Designed and implemented **ETL pipelines** with **Telegraf**.
- Developed **monitoring frameworks** for **HPC systems** and **WI-FI** networks with comprehensive **Grafana** dashboards.
- Automated workflows using **Python** and **Shell** scripting.
- Built **APIs** for **SQL** and **NoSQL** databases.
- Engineered algorithms for **data analytics**.
- Operated databases systems including **PostgreSQL**, **Victoriametrics** and **Elasticsearch**.
- Implemented **Protocol Buffers** and **gRPC** for microservices communication.
- Developed **Docker** images and orchestrated applications using **Docker Compose**.
- Implemented **Version Control Systems** to ensure code integrity.
- Worked across diverse **funded projects** from inception to production.
- Handled **ONVIF** protocol M to extract valuable detections from camera metadata streams
- Collaborated with global partners.

Languages

Portuguese (Native)

English (Fluent)

Tech Skills

Programming Languages

Python Golang

Web Development

HTML CSS

Databases

SQL/NoSQL PromQL PostgreSQL
Victoriametrics

Dashboarding

Grafana Kibana

Containerization and Orchestration

Docker Docker Compose

Data serialization

JSON CSV Protobuf YAML

Others

Prometheus Git Telegraf Linux
Bash/Shell gRPC

Python Experience

Software Development and APIs

FastAPI SQLAlchemy Psycopg Aiohttp
Pydantic Asyncio Requests

Data Analytics

Pandas Seaborn Numpy Matplotlib
Tensorflow

Computer Vision

ImageAI OpenCV Ultralytics

Relevant Links

- BigHPC Project: <https://bighpc.wavecom.pt/>
- BigHPC Speaker: <https://www.youtube.com/watch?v=5gaivo9DD0>
- Thesis Link: <https://ria.ua.pt/handle/10773/30553>
- Thesis Paper : https://ceur-ws.org/Vol-2696/paper_91.pdf