

# JÚLIO MIGUEL BRAZ DA COSTA SILVA

M.Sc Electronics and Telecommunications Engineering

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in julio-miguel-silva

📍 Tondela, Portugal



## 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

R&D Engineer (Hybrid)

Wavecom

📅 Jan 2021 – Present Time

📍 Aveiro, Portugal

- Decision-making in diverse projects from inception to production.
- Designed and implemented **ETL pipelines**.
- Developed microservices both in **python** and **golang**.
- Developed scripts and automated processes using both **python** and **Shell** for efficient workflow management.
- Created **APIs** for **SQL** and **NoSQL** databases.
- Engineered algorithms for advanced data analytics.
- Managed databases such as **PostgreSQL**, **Victoriametrics**, and **Elasticsearch**.
- Implemented **Protocol Buffers** and **gRPC** for efficient microservices communication.
- Developed **Docker** images, orchestrated applications with **Docker Compose**.
- Employed **Telegraf** to optimize the efficiency of data collection, processing and seamless transfer to databases.
- Utilized Version Control Systems for code integrity.
- Designed comprehensive **Grafana** dashboards for effective data visualization.
- Applied **Computer Vision** algorithms in research and development.
- Experience with **HPC** systems (developed a monitoring framework with alarms).
- Collaborated with partners globally.
- Conducted client meetings, ensuring requirements fulfillment.

## LINKS

- **BigHPC Project**: <https://bighpc.wavecom.pt/>
- **BigHPC Speaker**: <https://www.youtube.com/watch?v=5gaiovo9DD0>
- **Thesis Link**: <https://ria.ua.pt/handle/10773/30553>
- **Thesis Paper** : [https://ceur-ws.org/Vol-2696/paper\\_91.pdf](https://ceur-ws.org/Vol-2696/paper_91.pdf)

## TECH SKILLS

Programming Languages

Python Golang

Databases

SQL/NoSQL PostgreSQL TimescaleDB  
Elasticsearch Victoriametrics Prometheus  
Promscale PromQL pgAdmin

Dashboarding

Grafana Kibana

Containerization and Orchestration

Docker Docker Compose

Data serialization

JSON CSV Protobuf YAML

Others

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

## STRENGTHS

Analytical and Critical Thinking  
Problem-Solving Orientation  
Teamwork and Collaboration Research  
Eager to Learn and Adapt Self-Taught

## LANGUAGES

Portuguese (Native) English (Fluent)