

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

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)