JÚLIO MIGUEL BRAZ DA COSTA SILVA

M.Sc Electronics and Telecommunications Engineering

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📍 Portugal
in julio-miguel-silva
⌂ jmbcs

PORTFOLIO LINK

https://portfolio-julio-silva.streamlit.app/

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

- 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.

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

RELEVANT 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

LANGUAGES

Portuguese (Native)   English (Fluent)