FRANCISCO IZQUIERDO

SOFTWARE ENGINEER

CONTACT

+351 938709784

franciaguia@hotmail.com

Travessa do Falcão nº9,
Canelas-Estarreja 3865-004,
Aveiro, Portugal

Linkedin Github

HARD SKILLS

- Python, C, C++, C#, Java, SQL
- Linux, Docker, MySQL, PostgreSQL
- Machine Learning, Deep Learning
- Keras, TensorFlow, PyTorch, OpenCV, Pandas, Numpy, Seaborn, Matplotlib
- Jupyter Notebook, Kaggle
- Data Treatment, Analysis, Visualization
- Creation and Fine-Tuning of ML Models and Neural Networks

SOFT SKILLS

- Collaborative
- Self-motivated
- Strong communication
- Autonomous
- Entrepreneurial spirit

OTHERS

- 2nd place award at the pre-acceleration program for best startup idea at Startup Braga
- Special award by Capgemini at Mostra Nacional de Jovens Empreendedores 2024
- Honor student at Colégio de Albergaria

LANGUAGES

- Portuguese (Native)
- English C1
- Spanish B2

PROFILE

Machine Learning Engineer specialized in Application Engineering and Intelligent Systems. With over two years of experience in academia and industry, skilled in data treatment, analysis and visualization of large datasets, fine-tuning pre-trained models, creating neural networks and managing vector databases. Thrives in multicultural teams, with strong communication and collaboration skills.

WORK EXPERIENCE

Altice Labs SEPTEMBER 2023 - PRESENT
Machine Learning Engineer

Enterprise-Level Image Retrieval and Search System

- Developed and deployed an enterprise microservice for MEO Cloud, enabling thousands of users to efficiently search and retrieve images using AI models and tools (e.g. PyTorch and Python).
- Integrated and deployed the system in a cloud environment through Docker and Kubernetes technologies.
- Used third-party vector databases platforms, allowing to secure in an isolated and scalable way millions of user's data.

Traffic Data Analysis and Optimization System

- Developed data-driven solutions to analyze and optimize traffic patterns, aiding counties in improving road management and resource allocation.
- Processed large traffic datasets, using tools like Pandas, Matplotlib and Seaborn, generating insightful visualizations to profile road activity across counties.
- Modeled traffic patterns as time series data to predict jam occurrences and road congestion trends.
- Represented cities as graph data structures to model road networks effectively and implemented shortest path algorithms to optimize emergency response and event planning routes.

EDUCATION

University of Minho SEPTEMBER 2019 - JULY 2024
Master's Degree in Informatics Engineering

Jobra Music Conservatory SEPTEMBER 2011 - JULY 2016
Level 5 - Saxophone

PROJECTS

- **CrowdFlow:** Plug and play system that collects and analyse the consumer data, combining Computer Vision Neural Networks and surveillance cameras in establishments.
- **Face Fraud Detection**: Computer Vision Neural Network to detect faces generated by Artificial Intelligence.
- **oNode**: Prototype for delivering audio/video/text from a content server to a set of clients using various transport protocols.
- **Folder Fast Sync**: Folder synchronization application without the need for servers or Internet connectivity, using a root transport protocol over UDP.

PUBLICATIONS

- ***Efficient Image Search and Retrieval System in Cloud Platforms***, EPIA2024 International Conference on Artificial Intelligence
- ***Artificial Intelligence in efficient image search on MEO Cloud***, Altice Labs White Paper