

Johnny Fernandes

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Professional Summary

AI-focused Software Engineer with experience building production-grade applications and a strong foundation in Informatics Engineering. Currently pursuing a Master's in Artificial Intelligence at the University of Porto, with academic work in intelligent systems, deep and reinforcement learning, computer vision, and natural language processing. Brings together solid software engineering principles and AI-driven thinking to design scalable, reliable, and intelligent systems.

Education

University of Porto – Master's in Artificial Intelligence *Attending*

- Core Areas: Machine Learning, Data Science, NLP, Computer Vision, Robotics

University of Coimbra – Bachelor's in Informatics Engineering *July 2024*

- Core Areas: Programming, Data Structures, Operating Systems, Databases

University of Aveiro – Bachelor's in Tourism *July 2015*

Relevant Experience

Engineering Consultant – Capgemini Engineering *Dec 2024 – Sep 2025*

- Completed the Talent Factory Program in the Automotive domain, with training in Android Automotive OS, embedded systems, safety-oriented development, and application engineering.
- Contributed to the development of infotainment features for Polestar vehicles, helping deliver seamless in-car user experiences for upcoming models.
- Implemented production-grade features in Java and Kotlin, applying coroutines, extension functions, and modular architectural patterns to support clean, scalable, and maintainable code.
- Worked within cross-functional Agile teams, contributing to sprint planning, backlog refinement, code reviews, and collaborative delivery workflows.
- Used Git, Jira, and CI/CD pipelines as part of the day-to-day development lifecycle in a production environment.

Digital Platform Lead – Turismo in Aveiro *Jan 2015 – Dec 2020*

- Led the launch and management of a regional Online Travel Agency (OTA) platform, combining operations, customer focus, and business execution.
- Oversaw website structure, e-commerce integration, and booking workflows to improve usability and operational efficiency.
- Implemented CRM and digital marketing initiatives to strengthen online presence and support business growth.
- Gained hands-on experience in digital product ownership, market positioning, and entrepreneurial decision-making.

Projects and Technical Interests

Deepfake Face Classification

- Implemented and evaluated deep learning models for real-vs-fake facial image classification, starting from a baseline convolutional approach and progressing to more advanced architectures.
- Designed a preprocessing pipeline with face detection/cropping, augmentation, and dataset handling to support robust training and improve generalization.
- Iteratively refined architecture and training choices based on intermediate results, with a strong focus on experimental comparison and performance evaluation.

Evolutionary Algorithm for Vehicle Simulation

- Implemented key components of the EA, including parent selection, crossover, mutation, and fitness functions, focusing on attributes like vehicle speed and energy efficiency.
- Conducted experiments across various configurations to fine-tune algorithm parameters, resulting in a progressive improvement in vehicle fitness through generations.

Technical Skills

Languages: Python, Java, Kotlin, C, C++

AI & Computer Vision: Numpy, PyTorch, scikit-learn, OpenCV

Software Engineering: Git, Docker, Linux, CI/CD