

ANDRÉ CORREIA

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SUMMARY

PhD in Machine Learning with focus on Imitation and Reinforcement Learning. 1+ year of industry experience applying ML models in production environments. Interested in ML engineering and applied research roles.

SKILLS & LANGUAGES

Machine Learning	Imitation, Reinforcement and Supervised Learning, Computer Vision
Tools & Frameworks	PyTorch, TensorFlow, NumPy, Pandas, Scikit-Learn, Flask, FastAPI, Docker, Git
Programming	Python, Java, C++
Languages	Native Portuguese, C2 English, B1 Spanish, A2 German

WORK EXPERIENCE

DeepNeuronic December 2024 - Present
Software Engineer and ML Researcher

- Created a custom theft action dataset and benchmarked hundreds of Large Video Language Models (LVLMs) for theft detection in surveillance applications.
- Researched state-of-the-art multi-camera tracking methods, implemented baseline algorithms, and combined them to enhance tracking robustness across multiple camera views.
- Built a large-scale age and gender dataset combining public data, manual annotation, and synthetic data generated via generative models; trained and deployed an age and gender classification model.
- Created and annotated a personal protective equipment (PPE) dataset and trained a computer vision detection model to identify compliance with required PPE in real-world scenarios.
- Identified performance bottlenecks and refactored core components, improving code efficiency and quality while reducing dependency overhead; later documented the full codebase to improve maintainability and onboarding.

PROJECTS AND PUBLICATIONS

A Survey of Demonstration Learning 2024

- Comprehensive survey of demonstration learning, covering problem formulation, learning methods, benchmarks, applications, and open research challenges. [Link](#)

Hierarchical Decision Transformer and Mamba 2023 & 2026

- Advanced state-of-the-art sequence modeling in offline reinforcement learning using Transformer and Mamba-based architectures. [Transformer Link](#) — [Mamba Link](#)

Multi-View Contrastive Learning from Demonstrations 2022

- Framework to learn task-relevant visual representations from demonstrations using contrastive learning, enabling context-independent policy learning for robotic manipulation tasks. [Link](#)

DEFENDER 2023

- Task-agnostic method to improve RL safety by filtering unsafe behaviors using limited demonstrations, significantly reducing crash rates while maintaining or improving performance. [Link](#)

Music to Dance as Language Translation 2026

- Transformer and Mamba based framework to translate music to dance, applied to a robotic arm. [Link](#)

EDUCATION

Universidade da Beira Interior, Covilhã

- **PhD in Computer Science (Engineering) - High Honors** August 2020 – October 2024
Dissertation: Improving the Robustness of Demonstration Learning
Research focus: Imitation Learning, Reinforcement Learning
- **Bsc and MSc in Computer Science (Engineering) - CGPA: 18/20** August 2015 – June 2020