Miguel Cabral Dias Fernandes de Oliveira

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linkedin.com/in/miguel-cabral-oliveira github.com/MiguelCabralOliveira

Education

Technical University of Denmark (DTU), MSc Eng in Artificial Intelligence and Algorithms Sept 2025 – Present

Porto Polytechnic Institute of Engineering (ISEP), BS in Computer Science Sept 2021 – Jun 2025

- GPA: 14/20
- Coursework: Computer Architecture, Databases, Advanced Algorithms, Graphical Systems and Interaction, Statistics and Empirical Methods for Computing

University of Hradec Králové, Erasmus+ Exchange Sep 2023 – Jan 2024

- Exchange program at the Faculty of Informatics and Management in Hradec Králové, Czech Republic.

Bristol School, Cambridge English Qualification 2019

- Awarded the FCE, confirming B2-level proficiency.

Experience

CTO, Spradley AI, Organizational Intelligence 2026 – Present

- Technical lead across the AI interviewer, the analysis engine, and the product. Spradley's AI talks to everyone in a company, anonymously and in their own language, and turns what they say into findings for leadership in days.
- LLM orchestration for structured interviews, with vector retrieval over org-specific context to keep each conversation grounded in the company's own language.
- Async analysis workers turning raw transcripts into themes, signals, and reports.
- EU-hosted, GDPR and EU AI Act aligned.

AI/ML Engineer, Contimo, RTB Advertising Platform 2026 – Present

- ML for an RTB and native advertising platform serving publishers, brands, and agencies.
- Pulse: trending-content discovery for publishers. AI pipeline ranks top articles and generates localised headlines across languages.
- Campaign Alerts: real-time campaign health monitoring, with delivery forecasting and anomaly detection on pacing.

AI/ML Software Engineer, Revenya, Investment Banking Oct 2025 – 2026

- ML systems for corporate lending and real-estate analysis, with a production focus on reproducibility, auditability, and correctness of model outputs feeding lending decisions.
- GroundTruth: multi-agent real-estate market intelligence, covering autonomous research, analysis, and PDF report generation.
- Credit-scoring pipeline automating risk assessment for about $2M projected monthly loan volume, taking approval times from days to minutes.

AI/ML Engineer, Napps, E-commerce Platform Feb 2024 – Oct 2025

- Owned the AI side of a no-code app builder for e-commerce.
- Hybrid Graph Neural Network recommendation engine for real-time personalisation.
- AWS MLOps pipeline with automated CI/CD for model training and deployment.
- LangChain agentic workflow parsing unstructured e-commerce data for client onboarding.
- NLP-driven lead-scoring system prioritising high-intent leads.

Publications

A Dual-Model Architecture for E-commerce Recommendation Systems, ICITS'26 (Springer Proceedings) 2026

- Proposed a context-aware, dual-model architecture that adapts its recommendation strategy to user intent: a Temporal Graph Network (TGN) for discovery-oriented browsing on the homepage, and an evolutionary-optimized KNN for focused comparison on product pages.

Certifications

Machine Learning Specialization, DeepLearning.AI & Stanford University, via Coursera Jun 2025

- Advanced Learning Algorithms. Credential ID: 46OB9YU0K6RJ
- Supervised Machine Learning: Regression and Classification. Credential ID: ZOIVYSTR341H
- Unsupervised Learning, Recommenders, Reinforcement Learning. Credential ID: H9IAQ7RVY1PY
- Overall Specialization Credential ID: 2LU0WLMKOCNH

Projects

Napps Recommender: AI-Powered Recommendation Engine for E-commerce 2025

- Bachelor's thesis project, graded 19/20.
- Dual-model architecture: a Weighted KNN optimized with an evolutionary algorithm for content-based recommendations, and a Temporal Graph Network with Transformer-based attention to model dynamic user behavior.
- Complete MLOps pipeline on AWS: S3 for data and model artifacts, Step Functions for orchestration, SageMaker for training, and Lambda for low-latency real-time predictions.
- Tech stack: Python, PyTorch, Scikit-learn, Pandas, AWS (S3, Lambda, SageMaker, Step Functions).

MedConnect: Hospital Management & Scheduling Optimization System 2024

- Full-stack hospital management platform built for the subject LAPR5, graded 20/20.
- Tech stack: C#, Node.js, Angular, MySQL, NoSQL, OpenAI API, Google API.

Repository2Docx: Semantic Code Analysis for LLM Ingestion 2023

- Tool that generates structured documentation from source code repositories for ingestion by LLMs, using an Abstract Syntax Tree parser to extract components and their relationships.
- Tech stack: Python, AST Parsing, NLP.

MovieRecommender: Content-Based Recommendation Engine 2022

- Content-based recommendation engine using an NLP pipeline with TF-IDF vectorization.
- Tech stack: Python, Scikit-learn, Pandas, NLTK.

Awards & Competitions

PBJJF European Jiu-Jitsu Champion 2025

First Place, Kaggle Competition: Counter-Strike Sticker Market Forecasting 2023

- Winning predictive model for price trends in the Counter-Strike virtual item market.
- Time-series analysis, feature engineering, predictive modeling (ARIMA, XGBoost).

Technical Skills

AI & Data Science: PyTorch, Scikit-learn, Keras, Pandas, Deep Learning, Transformers, NLP, LLMs, LangChain, LangGraph, Langfuse, Vector Databases, Apache Airflow, ETL, Recommendation Systems
Languages & Databases: Python, SQL (MySQL, PostgreSQL), NoSQL (MongoDB, DynamoDB), C#, Java
MLOps & Cloud: AWS (SageMaker, Lambda, Athena), Vercel, Docker, Git, CI/CD, REST APIs
Software Engineering: System Design, Microservices, .NET, FastAPI, Next.js

Certificates Appendix

3 Courses

Supervised Machine Learning: Regression and Classification

Advanced Learning Algorithms

Unsupervised Learning, Recommenders, Reinforcement Learning

Jun 19, 2025

Miguel Cabral Oliveira

has successfully completed the online, non-credit Specialization

Machine Learning

Congratulations on completing all three courses of the Machine Learning Specialization! You studied modern machine learning concepts, including supervised learning (linear regression, logistic regression, neural networks, decision trees), unsupervised learning (clustering, anomaly detection), recommender systems, and reinforcement learning. You learned some of the best practices for building machine learning models. You've also gained practical skills to apply machine learning techniques to challenging real-world problems. Now #BreakIntoAI and start building your career in machine learning!

Andrew Ng
Founder,
DeepLearning.AI and
Adjunct Professor,
Stanford University

The online specialization named in this certificate may draw on material from courses taught on-campus, but the included courses are not equivalent to on-campus courses. Participation in this online specialization does not constitute enrollment at this university. This certificate does not confer a University grade, course credit or degree, and it does not verify the identity of the learner.

Verify this certificate at:
https://coursera.org/verify/specialization/2LU0WLMK0CNH

DeepLearning.AI

Stanford | ONLINE

COURSE CERTIFICATE

Jun 19, 2025

Miguel Cabral Oliveira

has successfully completed

Advanced Learning Algorithms

an online non-credit course authorized by DeepLearning.AI and Stanford University and offered through Coursera



Andrew Ng
Founder, DeepLearning.AI and Adjunct Professor, Stanford University

Verify at:
https://coursera.org/verify/46OB9YU0K6RJ

Coursera has confirmed the identity of this individual and their participation in the course.

DeepLearning.AI

Stanford | ONLINE

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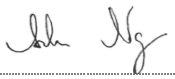

Andrew Ng
Founder, DeepLearning.AI and Adjunct Professor, Stanford University



Verify at:
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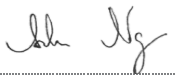

Andrew Ng
Founder, DeepLearning.AI and Adjunct Professor, Stanford University



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Recommendatino Letters Appendix

Instituto Superior de Engenharia do Porto

Instituto Politécnico do Porto

Departamento de Engenharia Informática

CARTA DE RECOMENDAÇÃO

Conheço o Miguel Oliveira há já vários anos, muito antes de iniciar o seu percurso académico no ISEP. Assinalo as suas qualidades pessoais e humanas, seguramente induzidas pela sua família, tratando toda a gente com cordialidade e respeito.

O seu percurso académico tem vindo num crescendo, tendo-se afirmado de uma forma consistente nos tempos mais recentes.

Dada a sua capacidade intelectual, as suas qualidades técnicas e a sua predisposição para estudar novos assuntos, estou seguro de que, qualquer que seja o desafio académico, profissional ou pessoal que enfrente, o Miguel tem ótimas condições para atingir os seus objetivos.

Não duvido que a sua intenção de se candidatar ao Mestrado em Engenharia de Inteligência Artificial foi uma decisão ponderada e com uma perspetiva sólida de terminar com sucesso a sua formação.

Assim, é para mim uma honra escrever esta carta de recomendação para o Miguel Oliveira.



Marílio Cardoso
Professor Adjunto do Departamento de Engenharia Informática
Instituto Superior de Engenharia
Instituto Politécnico do Porto

Porto, 19 de junho de 2025

gecad
Grupo de Investigação em Engenharia e Computação Inteligente para a Inovação e o Desenvolvimento

Porto, 7th of October 2025

Dear Members of the Admissions Committee,

I am writing to recommend Mr. Miguel Cabral Dias Fernandes de Oliveira for admission to the Master's in Computer Science – Artificial Intelligence and Algorithms at the Technical University of Denmark (DTU). I had the opportunity to supervise his Bachelor's Thesis at the School of Engineering of the Polytechnic Institute of Porto (ISEP).

Miguel's project, titled *"Napps Recommender: AI-Powered Recommendation Engine for E-commerce"*, was a technically advanced and well-executed project. He designed and implemented a dual-model recommendation system using Weighted KNN and Temporal Graph Networks with Transformer-based attention mechanisms. He also built a full MLOps pipeline on AWS, integrating data storage, model training, and deployment. His work was graded 19 out of 20, reflecting its strong technical and research quality.

During the project, Miguel showed solid programming and analytical skills, independence in problem solving, and a clear understanding of machine learning concepts. He is methodical, reliable, and capable of managing complex technical challenges with minimal supervision. His internship and ongoing work at Napps further demonstrate his ability to apply AI and data engineering principles in a professional context.

In short, Miguel is an excellent candidate for the master's program at DTU. He has the knowledge, skills, and commitment required to excel in this program. I fully support his application and look forward to seeing his future achievements.

Sincerely,

Gonçalo Marreiros

Full Professor at ISEP /IPP
Director of GECAD

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