

Timothée Afonso

Artificial Intelligence Engineer

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SUMMARY

Artificial Intelligence Engineer with 5 years of Python experience and 2 years designing and deploying AI/ML solutions. Led end-to-end projects from data collection to production, involving CNNs, LLMs, cloud pipelines (AWS, GCP), and model optimization. Passionate about computer vision, NLP, and combinatorial optimization, and motivated to contribute to impactful projects.

WORK HISTORY

Artificial intelligence and machine learning engineer

February 2025 - June 2025

Self-Storage.ai - Montréal, QC, Canada

- Automated object detection, 3D modeling, and dimension estimation for storage using images, eliminating manual input and database limitations. Enabled full object compatibility with 3D generation in 3 minutes, leveraging Machine Learning, Deep Learning, Large Language Models (LLM), and 3D Modeling techniques.
- Developed and deployed solutions via APIs on Google Cloud Platform, ensuring scalability, high availability, and integration with existing data workflows.

Artificial intelligence and machine learning developer

March 2024 - August 2024

Limagrain - La Ménitrie, 49250, France

- Led the development of a real-time algorithm for label detection and anomaly detection on packaging bag images, achieving processing times under 2 seconds with 99% classification accuracy. Applied advanced Machine Learning and Deep Learning methods in Computer Vision and Image Processing to ensure high reliability.
- Collaborated in R&D initiatives and authored detailed functional specifications, aligning technical designs with business goals and user requirements.

Software developer

April 2023 - June 2023

CPAM of Vendée - La Roche-sur-Yon, 85000, France

- Developed an application and automation system for customer relations at CPAM, leading the full project lifecycle from drafting technical specifications and functional specifications to database architecture and deployment. Designed and implemented the PostgreSQL database and integrated a public API to retrieve government data, reducing client-CPAM document exchange time by 50%.
- Applied Project Management methodologies to coordinate teams and ensure delivery timelines. Built backend features using Symfony and PHP, enabling seamless integration with existing systems.

Software developer

May 2022 - July 2022

Laboratory Littoral Environment and Societies - La Rochelle, 17000, France

- Automated the extraction and formatting of bibliographic data from the HAL archive using Python and PyQt, reducing processing time by over 95% (from hours to under a minute).
- Implemented advanced automation techniques and integrated new technologies mid-project to address evolving functional requirements, ensuring continuous alignment with project objectives.

SKILLS

- Programming Languages: Python, Java, C/C++, PHP, SQL
- Library: Flask, Hugging Face Transformers, Keras, MLflow, NLTK, OpenCV, PyTorch, Scikit-learn, TensorBoard, TensorFlow
- Machine Learning: Supervised, Unsupervised and reinforced learning algorithms
- Deep Learning: MLP, RNN, CNN, Transformers
- Data analysis and visualization tools: PowerBI, Matplotlib, Seaborn
- Cloud platforms: AWS, GCP
- Computer Vision, Image Processing, Natural Language Processing, Knowledge-Based Systems
- Linear and Combinatorial Optimization, Constraint Programming, Heuristic methods

EDUCATION

Master's degree in Computer Science

September 2022 - August 2024

University of Angers - Angers, 49000, France

- Artificial Intelligence

With Honors

Bachelor's degree in Computer Science

September 2018 - June 2022

University of La Rochelle - La Rochelle, 17000, France

- Signal Acquisition and Processing | Computer Vision | Intelligent Connected Environment | Data Analysis

With Honors

CERTIFICATIONS

- Microsoft Data Visualization with Power BI | Coursera | 98 hours
- AWS Fundamentals | Coursera | 54 hours

LANGUAGES

French: Native language | English: B1