Eldis **YMERAJ**

COMPUTER VISION · DEEP LEARNING · EXPLAINABLE AI

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Profile

Junior Artificial Intelligence Engineer with a Master's degree in Artificial Intelligence and a strong interest in Computer Vision, Natural Language Processing and Data Science. Currently completing an internship at Airbus, where I work on the explainability of vision models for visual landing systems. Seeking a **permanent or fixed-term position** to contribute to practical AI projects and develop robust, reliable and interpretable systems.

Skills

Programming Languages

Python, Java, C, C++, SQL, JavaScript

Machine Learning

Scikit-learn, SVM, PCA, clustering, GMM, boosting, optimization

Deep Learning

PyTorch, TensorFlow, Keras, CNN, transfer learning, fine-tuning

Computer Vision

OpenCV, YOLO, ByteTrack, image processing, video tracking

XAI

Xplique, CRAFT, concept-based methods, attribution methods

NLP

Transformers, CamemBERT, BERT, Hugging Face

Data & Cloud

Pandas, NumPy, MongoDB, PostgreSQL, SQLite, AWS EC2, Amazon S3

MLOps / Tools

Git, GitHub, Docker, Linux, Jupyter, Google Colab, LaTeX

Languages

Albanian

Native language

French

C2 – Fluent

English

C1 – Professional proficiency

Interests

Activities

Football, basketball, travel, video games

Education

University of Caen Normandy — *Caen, France*

Master's Degree in Artificial Intelligence — *09/2024 – 09/2026*

- Supervised and unsupervised learning, Deep Learning, NLP, computer vision, data mining, ETL and SQL/NoSQL databases.

University of Clermont Auvergne – ISIMA — *Clermont-Ferrand, France*

Bachelor's Degree in Computer Science — *09/2021 – 05/2024*

- DBMS, artificial intelligence, applied mathematics, linear programming, advanced algorithms, probability, statistics and operations research.

Professional Experience

Airbus SAS — *Toulouse, France*

Artificial Intelligence / Explainable AI Intern — *03/2026 – 09/2026*

- Contributed to the RELAI-VLS project on the explainability of runway detection models for visual landing systems.
- Adapted CRAFT, a concept-based explainability method, to a YOLOv8 Pose model to identify and visualize learned concepts.
- Evaluated the fidelity and robustness of explanations across model layers, datasets and experimental parameters.

Python, PyTorch, YOLOv8Pose, YoloNasPose, Xplique, CRAFT, NumPy, Pandas, Matplotlib, AWS EC2, Amazon S3, Git

Responsibio — *Caen, France*

Data Science Intern — *06/2025 – 08/2025*

- Developed an automatic classification system for mouse and rat vocalizations used in animal biomonitoring.
- Designed an audio processing pipeline combining spectrograms, feature extraction and data preparation.
- Trained and evaluated PCA- and SVM-based classification models, achieving approximately 80 % accuracy.

Python, Scikit-learn, PyTorch, NumPy, Pandas, PCA, SVM

Projects

Automatic Annotation of Clinical Narratives — *09/2025 – 03/2026*

- Developed an NLP pipeline to automatically annotate patients' autobiographical narratives at token level.
- Prepared the corpus, applied BIO annotation and fine-tuned CamemBERT to distinguish episodic and semantic details.

Python, PyTorch, Transformers, CamemBERT, Pandas

Handball Video Tracking — *09/2024 – 12/2024*

- Created and annotated datasets for players, goalkeepers, referees, the ball and court keypoints, then trained specialized YOLOv8 models.
- Developed a tracking pipeline combining ByteTrack for players, filtering and interpolation for the ball, and homography-based projection onto a 2D court.

Python, YOLOv8, OpenCV, ByteTrack

Interactive Sales Data Visualization — *02/2025 – 05/2025*

- Developed an interactive web application to explore sales data using a multi-container architecture.
- Implemented a GraphQL API connected to MongoDB and a dynamic data visualization interface with D3.js.

Docker, Node.js, GraphQL, MongoDB, D3.js, JavaScript