

SKILLS

Programming	Python, TensorFlow, PyTorch, Scikit-learn, SQL, NoSQL (MongoDB), Docker, Kubernetes, Git.
AI & Data Science	Machine Learning, Deep Learning, Computer Vision, Time Series Forecasting, NLP, LLMs, RAG Pipelines, Data Pipelines (ETL, Feature Engineering, Monitoring).
GenAI Tooling	HuggingFace Transformers, LangChain, Vector DBs (FAISS), OCR + LLM Pipelines, Prompt Engineering.
Dev & Deployment	FastAPI, Django, REST APIs, CI/CD, MLOps, Microservices, Monitoring (Prometheus, Grafana).
Cloud & Infrastructure	AWS SageMaker, Scaleway, Airflow, Docker Compose, Kubernetes.
Soft Skills	Technical Leadership, Project Management, Mentorship, Public Speaking, Technical Writing.
Languages	French (Native), English (B2), Ghomalah.

EDUCATION

PhD in Computer Science, Aix-Marseille University	Oct 2019 — Mar 2023
Master's degree in Mechatronics, National Advanced School of Engineering of Sud-Alsace, GPA: 4.0/4.0	Sep 2018 — Aug 2019
Engineer's degree in Mechatronics, National Advanced School of Engineering of Douala, GPA: 3.33/4.0	Sep 2015 — Aug 2017
Bachelor in Mechatronics, National Advanced School of Engineering of Douala, GPA: 3.33/4.0	Sep 2012 — Aug 2015

TECHNICAL EXPERIENCE

AI Researcher – Senior Data Scientist DMS Logistics	Aug 2023 — Present Marseille, France
<ul style="list-style-type: none"><li>Spearhead AI-driven innovations to optimize container logistics, leading to a <b>10% increase in operational efficiency</b>.</li><li>Led the design and deployment of a <b>GenAI-powered insight engine</b> based on <b>Retrieval-Augmented Generation (RAG)</b>, enabling natural language exploration of CO2 monitoring KPIs for clients.</li><li>Developed a document understanding pipeline combining <b>OCR systems with LLMs</b> to extract and summarize structured information from unstructured scanned documents.</li><li>Designed and deployed <b>end-to-end time series forecasting features</b> within the SaaS platform, enabling clients to predict and act on key logistics KPIs with improved accuracy.</li><li>Built and maintained scalable pipelines and services using <b>FastAPI, Docker, Kubernetes, Airflow</b>, and deployed on <b>Scaleway cloud infrastructure</b>.</li><li><b>Co-authored and presented scientific papers</b> at AI and domain-specific conferences, contributing to thought leadership in applied AI for logistics.</li></ul>	
Research Assistant Professor Institut Fresnel	Sep 2022 — Jul 2023 Marseille, France
<ul style="list-style-type: none"><li>Conducted research in <b>computer vision and medical imaging</b>, including deep learning applications for 2D/3D image segmentation and object detection.</li><li>Supervised Master's students on thesis topics involving <b>deep neural networks, generative models, and explainable AI</b>.</li><li>Delivered graduate-level lectures in <b>deep learning, signal processing</b>, and modern ML techniques.</li><li>Co-authored high-impact publications and conference papers in the field of computer vision.</li></ul>	
Researcher in Computer Vision LIS Laboratoire d'Informatique et Systèmes	Oct 2019 — Aug 2023 Marseille, France
<ul style="list-style-type: none"><li>Developed deep learning models for <b>melanoma detection and classification</b> using CNNs and attention-based architectures.</li><li>Conducted extensive experiments with <b>image segmentation and multi-modal fusion</b> techniques for early diagnosis.</li><li>Participation in collaborative research projects focused on developing AI algorithms for medical imaging, including the <b>ANR project [DIAMELEX]</b>.</li><li>Published results in <b>top-tier medical imaging and AI journals</b>.</li></ul>	
AI & Computer Vision Research Intern LIS Laboratoire d'Informatique et Systèmes	Apr 2019 — Sep 2019 Marseille, France
<ul style="list-style-type: none"><li>Created a proof-of-concept <b>AI-powered diagnostic tool</b> for skin cancer detection.</li><li>Applied <b>feature selection and dimensionality reduction</b> (PCA, RFE) to optimize classifier performance.</li><li>Implemented multiple ML models (SVM, CNN, MLP) with tuned hyperparameters for medical datasets.</li></ul>	

### ACADEMIC EXPERIENCE

#### SQL Instructor – Part-Time Teaching

Oct 2024 — Present

IUT Networking and Telecommunications, Aix Marseille University

Marseille, France

- Provide hands-on **practical sessions in SQL databases** for undergraduate students in Networking and Telecommunications.
- Guide students through relational schema design, complex queries, indexing, and database normalization.
- Support the development of applied projects and assessments to strengthen industry-relevant database skills.

#### Research Assistant Professor (hourly volume: 192h/year)

09/2022 — 08/2023

Faculty of Sciences of the University of Aix-Marseille

Marseille, France

- Operation of computers - Licence 1 preparation to scientific studies : Tutorial and practical work
- Programming - Bachelor in mathematic and computer science : Practical works
- Introduction to software engineering - Bachelor in computer science : Practical works
- Embedded systems - Master degree in TSI : Tutorial and practical work
- Programming - Bachelor in computer science : Practical works
- Signal acquisition and processing - Master degree in EEEA : Practical works
- Digital processing of measurement - Bachelor in SPI : Practical works

#### Teaching Assistant (hourly volume: 64h/year)

10/2019 — 08/2022

IUT Networking and Telecommunications, Aix Marseille University

Marseille, France

- Transmission mathematics: Tutorial and practical work
- Communication Writing of internship report (MS WORD), presentation (MS Powerpoint): Tutorial and practical work
- Database (SQL): Practical work

### SUPERVISION

#### Master's student

03/2023 — 08/2023

University of Strasbourg.

Internship for Master's thesis project.

Topic: "Detection, study, and reduction of outlier data in medical images using deep learning".

Technical environment: Python.

#### Master's student

03/2022 — 08/2022

Ecole centrale de Marseille.

Internship for Master's thesis project.

Topic: "Segmentation of skin cancer images using convolutional neural networks".

Technical environment: Python, Matlab.

### PUBLICATION

**Arthur Cartel Foahom Gouabou, et al.** [Forecasting Empty Container availability for Vehicle Booking System Application](#). In: *Proceedings of the 28th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems (KES-2024)*, 2024.

Faouzi Hakimi, Tarek Khaled, Mohammed Al-Kharaz, **Arthur Cartel Foahom Gouabou**, Kenza Amzil. [Towards a Digital Twin Modeling Method for Container Terminal Port](#). In: *Proceedings of the 28th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems (KES-2024)*, 2024.

Jilliana Monnier, **Arthur Cartel Foahom Gouabou**, Meryem Serdi, et al. [Automated melanoma detection. An algorithm inspired from human intelligence characterizing disordered pattern of melanocytic lesions improving a convolutional neural network](#). *Journal of the American Academy of Dermatology*, 2024.

**Arthur Cartel Foahom Gouabou, et al.** [Computer Aided Diagnosis of Melanoma using Deep Neural Networks and Game Theory: application on Dermoscopic Images of Skin Lesions](#) In: *International Journal of Molecular Sciences*, 2022, vol. 23, no 22, p.13838.

**Arthur Cartel Foahom Gouabou, et al.** [End-to-End Decoupled Training for Long-tailed Classification applied on Skin Lesion Classification from Dermoscopic images](#) In: *Electronics*, 2022, vol. 11, no 20, p.3275.

**Arthur Cartel Foahom Gouabou, et al.** [Rethinking decoupled training with bag of tricks for long-tailed recognition](#). In: *2022 Digital Image Computing: Techniques and Applications (DICTA)*, 2022, Sydney (Australie) (Oral presentation).

Jilliana Monnier, **Arthur Cartel Foahom Gouabou**, Meryem Serdi, et al. [Automated detection of melanoma. Comparing a Convolutional Neural Network \(CNN\) approach with an algorithm assessing disorder in the pattern of pigmented lesions, intended to mimick onco-dermatologists visual analysis](#). In: *European Society for Medical Oncology Congress (ESMO)*. Elsevier, 2022.

(+33) 0610670742  
Marseille, France  
cartelgouabou@gmail.com

# Arthur Cartel Foahom Gouabou

AI Researcher - Data Scientist

GitHub: [cartelgouabou](#)  
Website: [cartelgouabou.github.io](#)

---

Jilliana Monnier, **Arthur Cartel Foahom Gouabou**, Meryem Serdi, *et al.* Automated detection of melanoma. Comparing an algorithm based on the characterization of pattern disorder of the lesion, mimicking dermatologist practice, with a convolutional neural network approach. In: *European Academy of Dermatology and Venereology Congress (EADV)*, 2022.

**Arthur Cartel Foahom Gouabou**, *et al.* HMLoss: une nouvelle fonction de coût robuste au déséquilibre de classe. *GRETSI 2022: XXVIIIème Colloque*, 2022, Nancy (France) (Poster presentation).

Jilliana Monnier, **Arthur Cartel Foahom Gouabou**, Meryem Serdi, *et al.* Détection automatique du mélanome : comparaison d'un algorithme fondé sur la caractérisation de l'aspect désordonné de lésions mélanocytaires mimant la pratique des dermatologues, avec une approche par CNN (Convolutional Neural Network) *Annales de Dermatologie et de Vénéréologie-FMC*, 2021, vol. 1, no 8, p. A135.

**Arthur Cartel Foahom Gouabou**, *et al.* Ensemble Method of Convolutional Neural Networks with Directed Acyclic Graph Using Dermoscopic Images: Melanoma Detection Application *Sensors*, 2021, vol. 21, no 12, p. 3999.

Jilliana Monnier, **Arthur Cartel Foahom Gouabou**, Caroline Gaudy-Marqueste, *et al.* Impact d'un artefact fréquent sur la détection automatique du mélanome à partir d'images dermoscopiques : approche deep learning combinée à l'algorithme Support Vector Machine *Annales de Dermatologie et de Vénéréologie*, 2021, vol. 147, no 12, p. A82.