

THOMAS CHAMBON

AI - Data Scientist

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RESUME

AI scientist with 5 years of experience in Deep Learning, Computer Vision, and NLP. Focused on advancing natural language processing and optimizing deep neural network architectures. Strong background in deploying AI models to production (PyTorch, Docker, HPC) and in applied research, with publications in international conferences. Comprehensive mastery of the AI project lifecycle, from R&D to industrialization.

SKILLS

- **Programming & Data Science:** Python, Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch, HuggingFace.
- **Computer Vision & NLP:** OpenCV, CNNs, Transformers, LLMs, SpaCy, Gensim
- **Big Data & Distributed Systems:** HPC, SLURM, Apptainer, Docker, Dataiku
- **Databases & Data Modeling:** PostgreSQL, MongoDB, Neo4j (graph modeling)
- **Visualization & Reporting:** Matplotlib, Seaborn, Tableau
- **Development Practices:** Agile/Scrum methodology, Git, SVN

RELEVANT WORK EXPERIENCE

Research Scientist, R&D – Image Segmentation Optimization

L3i Laboratory, La Rochelle, 2023–2024

- Implemented deep learning models (**Mask2Former**, **DeepLabV3**, **EfficientSAM**) for image segmentation (Python).
- Reduced processing time by **50 %** through innovative graph clustering techniques.
- Built large-scale image processing pipelines with **PyTorch**, **OpenCV**, and **Scikit-learn** on High-Performance Computing infrastructure (**NVIDIA A100 GPUs**, **SLURM**, **Apptainer**).
- Validated models on **over one million images** from benchmark datasets (**COCO**, **ImageNet**)

Research Scientist, R&D – Analysis of Information Use and Impact on Urban Mobility

L3i Laboratory, La Rochelle, 2019–2023

- Designed and developed an IoT-based mobile tracking application for urban mobility, used by **1,000+ users** with a **90 % retention rate** over 3 months (**Android/iOS**).
- Developed the **data backend**: NoSQL data modeling (**MongoDB**) and REST API for real-time collection and analysis of geolocated data (**~20 million GPS points**) in Python.
- Published scientific papers and presented research at international conferences.
- Supervised and mentored Master's and PhD students in software quality (**metrics**, **design patterns**), agile project management (**Scrum**), and full data analysis lifecycle (**SQL/NoSQL modeling**, **data visualization**).

AI Software Developer

CGI, Niort, 2018–2019

- Developed **proof-of-concept (PoC)** solutions for **facial detection and tracking (Computer Vision)**. Built conversational assistant prototypes leveraging **NLP** techniques to improve intent recognition and response accuracy.

EDUCATION - CERTIFICATIONS

- La Rochelle University: **Ph.D. in Computer Science 2019-2023** | **MS.C. Big Data 2017-2019**
- **Numérique responsable (Green IT)** | **SecNumacadémie (ANSSI)** | **Intégrité scientifique (FUN MOOC)**

LANGUAGES

- **French** - Native | **Anglais** - Advanced | **Allemand** - Beginner