Guillaume **Fradet**

AI Scientist

(+33) 7 70 79 30 97 | guillaume-fradet@hotmail.fr | guillaume-fradet.com | fradetguillaume

Visit my website for more information (portfolio, interests, blog posts)

TL;DR

- 4 years of experience as a Deep Learning researcher at a medtech startup; core contributor to globally deployed AI solutions for radiology. Among the first hires (now a team of 50+).
- Master's degree in Data Science from École Polytechnique and Engineering degree from ESILV.
- Deepened expertise in Generative AI over the last months, including LLMs, agents, RAG, and frameworks such as LangChain.
- Seeking a role in an ambitious environment that pushes the boundaries of what's possible with AI.
- Immediately available after a planned year of international travel.

Education

École Polytechnique

Palaiseau, France

Master 2 in Data Science

2018 - 2019

- Advanced topics in Machine Learning
- Advanced Learning for Text and Graph Data
- Deep Learning
- Reinforcement learning
- Optimization for Data science
- Introduction to Graphical Models
- Big Data Framework (Hadoop, Spark, ES)
- Systems for Big Data Analytics
- Visualization and Visual Analytics for Data Science
- Data Stream Processing
- Machine Learning, Business case
- Big data & insurance
- Data infrastructure (NoSQL)
- Mixed Effects Models for the Population Approach

ESILV

Paris - La Défense, France

Master of Engineering

2014 - 2019

- Major: Computer Science, Big Data and connected objects
- Activities and associations: Member and Communication Manager of the robotics club *DaVinciBot* (participated in the French Robotics Cup 2016 and 2017).
- Example of the classes followed:
  - Machine Learning and clustering
  - Mobile application development
  - Web Application Architectures
  - Adv topics in NoSql databases
  - Embedded Systems: architecture & programming
  - MVC: interfaces and data
  - Inferential statistics
  - Numerical analysis
  - SQL Database
  - Signal processing

Louisiana Tech University

Ruston, LA, USA

Exchange program

Fall 2017

- Major: Computer Science
- Courses: Adv data structures & algorithms, Software design & engineering, Computer Networks
- GPA: 4.0 (A)

Online Learning & Certifications

- *Generative AI with Large Language Models* — DeepLearning.AI & AWS
- *5-Day Gen AI Intensive Course* — Google & Kaggle
- *AI Agents Course* — Hugging Face

Experience

AZmed — *Paris, France*

Deep Learning Researcher — *Nov. 2019 - Nov. 2023 (4 years)*

- Development and continuous improvement of 2 certified algorithms to detect abnormalities on X-rays:
  - Trauma algorithm (CE & FDA): detecting fracture, dislocation, and effusion on any body part
  - Chest algorithm (CE & FDA): detecting consolidation, pleural effusion, cardiomegaly, pneumothorax, and pulmonary nodules
- Research focus: Object Detection, Domain Adaptation/Generalization, Semi-supervised learning, Continual Learning
- Company growth: One of the first employees. From 0 to 500+ healthcare centers in production. From 3 to 30+ employees.
- MLOps responsibilities: Integration of the models into Rayvolve software (i.e. code of the inference), defining and developing the deployment process, AWS cost optimization.
- Code owner in the AI team, responsible for code reviews.
- Cross-department collaboration: Served as the point of contact in the AI team for the Dev and Ops. Involved in product choices, HR processes (recruitment, onboarding, culture), and AI training for Business and CS teams.
- Technologies used: Python, PyTorch, AWS, Docker.
- *Blog post:* Domain Adaptation: the key to deploy algorithms on a large scale

Capgemini Engineering — *Vélizy-Villacoublay, France*

Data Scientist (intern) — *April - Sept. 2019 (6 months)*

- Project Focus: Applied machine learning methods on radiomic data and deep learning techniques on MRI images to classify, detect, and segment benign and malignant tumors (lipomas and liposarcomas).
- Clinical Impact: Aimed to reduce unnecessary biopsies by enabling direct diagnosis from MRI images, benefiting patients by avoiding invasive examinations and saving medical structures time and resources.
- Research Collaboration: Worked in collaboration with the biomedical imaging research laboratory CREATIS.
- Contributed to a publication in European Radiology Experimental following the internship.
- *Publication:* Prediction of lipomatous soft tissue malignancy on MRI: comparison between ML applied to radiomics and DL
- *Internship report:* Radiomics vs. Deep Learning to predict lipomatous soft tissue tumors malignancy on Magnetic Resonance Imaging

SoftBank Robotics Europe — *Paris, France*

Full Stack Developer (intern) — *April - Aug. 2018 (5 months)*

- Developed a web-app archiving system for NAO and Pepper robot test data.
- Application: "A.S.T.R.", a RESTful API-based web application, deployed across SoftBank Robotics.
- Open Source: Application and Python library available on the company's GitHub.
- Key Responsibilities:
  - Elaboration of specifications.
  - Technology choices.
  - Development of the web application (API and website).
  - Development of a Python library.
  - Managing the sending of large files to the server.
  - User management.
  - Advanced archive search.
  - Deployment management.
- Technologies used: Node.js, MongoDB, Express, Python, Git, Docker, Ansible
- *Source code:* the web application and the Python library

Fishfriender — *Paris, France*

Developer (intern) — *June - July 2017 (2 months)*

- Automated the data retrieval and processing from partners.
- Inserted the adapted data into the application's database.
- Handled data from Excel spreadsheets and web pages using web scraping.
- Technologies used: Node.js, JavaScript, SQL, JSON

Interests

- Outdoor sports: climbing, hiking, running, mountaineering, scuba diving
- Traveling: spent 2024 on international travel