

1 Fabien FURFARO

Lead Data & AI Engineer

1.1 Profile

After gaining experience in electronics at Enedis and Vinci, I obtained a PhD in physics, using computer vision techniques. Following my doctoral studies, I developed a new optimization algorithm for artificial intelligence applications. Arriving at Capgemini, I led the iPowertrain research project at Capgemini Engineering. The project aims to develop innovative solutions to optimize the design and energy management of vehicles, where I also worked on reinforcement learning and generative models (NLP-LLM). Today, I am Lead Data Scientist at Thales, where I designed the architecture of a recommendation module based on constrained optimization and time series and implemented the solution.

1.2 Key Skills

- Artificial Intelligence
 - Machine Learning
 - Python
 - Reinforcement Learning
 - Science & Research
 - Generative AI
 - Project Management
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1.3 Education and Certifications

Degree	Institution
PhD in Physics	Université de Paris Cité
Master 2 - Biophysics	Université de Paris Cité
Licence de Physique	Université de Paris Diderot
BTS Electrotechnique	Lycée St Nicolas
Bac professionnel Electrotechnique	Lycée St Nicolas

1.4 Professional Experience

Lead Data Scientist | Capgemini *August 2024 – December 2025*

- Design of the architecture of a recommendation system
- Framing, scoping, and agile planning of development actions
- Development of the solution based on optimization under constraints and anomaly detection
- Data industrialization in a defense-related environment

Senior Data Scientist | Thales Group *June 2024 – March 2025*

- Experience in implementing solutions embedding machine learning, from data collection to production deployment

- Agile and dynamic project environments
- Understanding business challenges around data exploitation and deployment of Machine Learning and Deep Learning solutions
- Mastery of statistics, machine learning, and deep learning
- Proficiency in ML/DL frameworks (TensorFlow, PyTorch) and Python
- Experience with tools such as GitLab and Docker
- Familiarity with the entire lifecycle of development and deployment of AI models (MLOps)

Project Leader - AI Researcher | Capgemini Engineering (APA) *September 2022 – September 2024*

- Developing cooling solutions for automobiles
- Integration of an intelligent supervisor for vehicle control
- Project Management

Machine Learning Researcher | INSEP / CNAM *September 2019 – September 2022*

- Development of an evolutionary algorithm for neural network functionalization

Electronic Designer | Axians *September 2010 – July 2012*

Electrotechnician | ERDF (ex-Enedis) *September 2008 – August 2010*

1.5 Additional Skills

Technical: Reinforcement Learning, Generative AI, Data Analysis, Data Science, Large Language Model, Signal Processing, Computer Science, Control System, Electronics, NLP Tools, CAN Bus, OBD, Architecture

Functional: Artificial Intelligence, Machine Learning, Science & Research, Project Management, Anomaly Detection, Computer Vision, Deep Learning, Transformer Models, Constrained Optimization, Backlog Refinement

Tools: Simulink Coder, Atlassian Jira

Programming Languages: Python

Frameworks: PyTorch

Platforms: Microsoft Azure, MLFlow, TensorFlow

1.6 Languages

- French: Native
- English: Proficient