

Nicolas Foussard

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EDUCATION

INSA Lyon

September 2025 - August 2028

Engineering Degree in Computer Science (apprenticeship)

Lyon, France

- **Member of INSAIgo:** Participating in different sessions about algorithmics
- **Member of the Proto INSA Club:** Building Autonomous Driving solution to compete in Shell Eco-Marathon

IUT La Rochelle

September 2022 - August 2025

Bachelor of Science (BSc) in Computer Science

La Rochelle/Niort, France

- **1st year :** followed core curriculum
- **2nd and 3rd years :** followed Data/AI focused curriculum (apprenticeship)

EXPERIENCE

AI/ML Engineer

September 2025 - Present

Alouette.AI

Paris/Niort, France

- Start-up developing AI-powered solutions to assist engineers working on complex engineering systems.
- Designing and implementing **end-to-end AI workflows**, involving **R&D activities**
 - * **RAG pipelines** and **LLM/agent-based systems** for knowledge retrieval and automation.
 - * **Multimodal AI** (OCR, VLM) with domain-specific applications.
 - * **Infrastructure and deployment** (cloud/on-prem) with CI/CD, monitoring, and scalability.

Data Engineer / MLOps / Platform Engineer

September 2023 - August 2025

Groupe Covéa (MAAF, MMA, GMF)

Niort, France

- Leading insurance group in France, specialized in property & casualty insurance, health insurance, and asset management.
- 1st year as a **Data Engineer** : designing, developing and deploying Data projects on Big Data infrastructure.
- 2nd year as a **MLOps/Platform Engineer** : configuring and implementing Microsoft Azure and Databricks platform dedicated to Data Science.

PROGRAMMING CONTESTS & EVENTS

Competitive Programming Contests

Algorithmic, Cybersecurity, Web and others...

- **SWERC:** 107th/141 (2024), 100th/142 (2025)
- **24H de l'Info IUT:** 4th/21 (2023), 8th/32 (2024), 1st/39 (2025)
- **CodINSA:** 2nd (2026)
- **24H du Code:** Two-time winner (2024, 2025)
- **c0d1ngUP:** 3 podiums, 2 victories (2023–2025)
- **Nuit de l'Info:** Participant (2022, 2023)

Hackathons

Diverse Challenges

- **Unboxed : Medical AI Agentic:** Participant (2026)
- **{Tech: Europe} Paris AI Hackathon:** Participant (2026)
- **Hackthon Frugal'IA:** Participant (2025)
- **Startup Weekend Niort:** 1st (2024)

Community Engagement

Volunteering, Organizing, and Representation

- **Nuit de l'Info:** Organizer (2024)
- **Agile Niort:** Volunteer (2024, 2025)
- **DevQuest Niort:** Volunteer (2024, 2025)
- **Student Fairs (Niort, La Rochelle, Poitiers):** Student Representative (2023-2025)

TALKS

Au secours, de la data dans mon projet ! Streamlit à la rescousse...

Presenting Streamlit, a python library to easily create web UI

- **DevQuest Niort**, Niort, June 2025
- **Codeurs en Seine**, Rouen, November 2025
- **DevFest Strasbourg**, Strasbourg, November 2025

Sécurisation des LLM, découverte et retour d'expérience

Talking about LLM Security: the vulnerabilities, risks and solutions, with Clément Garcin

- **IANA**, La Rochelle, June 2025

Un RAG en 2026, ça donne quoi ?

Overview of the RAG ecosystem, explaining key technical concepts and mentioning main frameworks

- **Amiens Tech Festival**, Amiens, March 2026

PROJECTS

RoboLab101

December 2025 - Present

Exploring Robotics and AI with SO101 Robot Arms

- **Training VLA Models** for various tasks
 - * **Recording Datasets**: investigating Dataset Structure and how to build qualitative data to train models
 - * **Training Models**: discovering SOTA VLA Models (SmolVLA, ACT, Pi0.5) and exploring training parameters
 - * **Evaluating**: building procedural tests to evaluate trained models performance
- **Simulation**: discovering simulation tools and methods for synthetic Datasets
- **Security**: identifying security risks and mitigation solutions
- **Edge deployment**: uncovering on-device deployment stakes
- **Dexterity**: finding issues about dexterity and researching potential solutions

Autonomous Driving

September 2025 - Present

Building autonomous driving solution with Proto INSA Club for Shell Eco-Marathon competition

- **Hardware**: speed and wheel angle sensors, a Logitech webcam, and a Raspberry Pi
- **Software**: working with Matlab to build Perception, Planning, Control modules and State Flow System
 - * **Perception**: detect track limits and obstacles using computer vision algorithms
 - * **Planning**: determine the optimal path using path-finding algorithms
 - * **Control**: calculate physical commands based on the calculated optimal path
 - * **State Flow**: define current situation (driving, braking, stop) to decide motor control output

Data Science projects

School projects during BSc

- **Hate Speech**: building a classification model to detect toxicity in a text
- **Cocktail RAG**: implementing a vector search on cocktail recipes to power a RAG chatbot
- **The Office Classifier**: developing a text classification model to determine the character of The Office series.

RANDOM FACTS

- I competed in go-kart racing when I was 10-12 years old
- During high-school I was the Coach/Analyst for a semi-professional CS:GO team
- In my free time, I enjoy motorcycling, play tennis regularly, and occasionally practice the piano.