Sylvain LAPEYRADE

AI and Data Expert with over 5 years of experience in research, teaching, and applied AI. PhD in Game AI, published author, and instructor in ML, LLMs, and MLOps. Fluent in English, skilled with cloud platforms and open-source AI tools.

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Experience

AI Instructor (Freelance)   *Hexagone School (France)*   02/2025 - 04/2025
- Delivered intensive courses on Reinforcement Learning in video games, AI, and AI applied to cybersecurity.
- Prepared students for advanced roles in the field.

AI & Data Instructor (Freelance)   *Wild Code School (France)*   10/2024 - Present
- Co-designed and taught a full curriculum on ML, MLOps, DataOps, and LLMs.
- Enabled over 15 students to build and deploy cloud-native AI projects.

Data Scientist & Engineer Mentor (Freelance)   *OpenClassrooms (France)*   05/2023 - Present
- Mentored and evaluated over 50 students in 800+ sessions on real-world data science and engineering projects.
- Achieved a project validation rate of over 90% across ML, NLP, and cloud topics.

Generative AI Engineer (Freelance)   *URSCOP Auvergne (France)*   05/2024 - 11/2024
- Developed and deployed a sophisticated RAG-based LLM chatbot using LLM APIs, LangChain and MongoDB.
- Empowered employees to efficiently query internal documents, significantly reducing manual search time.

Data Scientist   *Shift Technology (Canada)*   09/2023 - 08/2024
- Developed fraud detection models using C# and Elasticsearch to improve claim triage precision.
- Built and deployed robust ETL pipelines in C# and Microsoft SQL Server for high-volume insurance data.
- Utilized TeamCity for continuous integration and deployment (CI/CD).

IT Instructor (Freelance)   *Compétences & Développement (France)*   11/2023 - 11/2024
- Authored and structured over 5 technical e-learning modules (AI, SQLite and SQL Server databases, Windows administration, UML, networks).
- Created content used by hundreds of students.

Data Analyst (Freelance)   *IFTH (France)*   04/2023 - 03/2024
- Engineered and visualized textile innovation datasets for EU reporting.
- Delivered dashboards that supported R&D decision-making.

University Teaching Assistant   *Clermont Auvergne University (France)*   09/2020 - 08/2023
- Taught approximately 200 hours of university-level courses in AI, neural networks, and game development.
- Supervised more than 10 student projects annually with high success rates.

Research Data Scientist (Intern)   *National Institute of Informatics (Japan)*   03/2020 - 09/2020
- Mined and analyzed very large-scale network data with unsupervised learning techniques.
- Provided network administrators with actionable guidance that improved overall network efficiency.

Research Machine Learning (Intern)   *Toulouse Informatics Research Institute (France)*   04/2019 - 09/2019
- Designed and trained RNN architectures (LSTM, GRU) to predict temporal patterns in network data.
- Reproduced research experiment results and extended them with novel comparisons.

Software Engineer (Intern)   *SCLE SFE (France)*   04/2017 - 07/2017
- Developed object-oriented Python modules for embedded hardware systems.
- Contributed to the automation of the translation of proprietary binary code.

Education

PhD in Game Artificial Intelligence   *France*
LIMOS - Clermont Auvergne University   10/2020 - 10/2023
- Conducted research on decision-making in video game AI, comparing rule-based systems, finite state machines, behavior trees, and symbolic reasoning using Prolog and ontologies.
- Designed and implemented NPC behaviours in Unity to evaluate their quality and performance.

Master in Computer Science, Networks, Telecommunications   *France*
UPSSITECH - Toulouse Paul Sabatier University   09/2018 - 09/2020
- Engineering curriculum focused on computer science, networks, and telecommunications.

Erasmus in Computer Science and Artificial Intelligence   *Sweden*
Linköping University   09/2019 - 02/2020
- Completed advanced coursework in Artificial Intelligence, Video Game, Multi-Agent Systems, and Game Theory.

Scientific Publications

Non-Player Character Decision-Making With Prolog and Ontologies   *CA, USA*
Conference on Games (CoG), 2023

Reasoning with Ontologies for Non-Player Character's Decision-Making in Games   *CA, USA*
AAAI Conference on AI and Interactive Digital Entertainment (AIIDE), 2023

Generate Emergent NPC Behaviours With Symbolic Reasoning   *MA, USA*
AIIDE Workshop on Experimental AI in Games (EXAG), 2022

Skills

Programming Languages: Python, SQL, C#, C, C++, Java, R, Rust, Prolog, JavaScript, LaTeX

Machine Learning: PyTorch, TensorFlow, Keras, scikit-learn, fastai, LangChain, HuggingFace, Transformers, Diffusers

Cloud/Data: AWS, Azure, GCP, Databricks, Snowflake, dbt, Spark, Airbyte, Airflow, n8n, MongoDB, Elasticsearch, Airtable

Software: Unity, Unreal Engine, Godot, Git, GitHub, GitLab, Jira, Docker, TeamCity, PowerBI, Tableau

Languages: English (bilingual), French (native), Spanish (professional), Japanese (elementary)