TRISTAN LECOURTOIS

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EDUCATION

Master of Computer Science, Mines de Saint-Etienne, France — Sept 2023
Ranked among the top 10 French prestigious engineering schools for academic excellence.

- Computer Science (Machine Learning, Python, C, C++, algorithmics, SQL)
- Mathematics, physics and chemistry
- Management, leadership and entrepreneurship

French "Classes Préparatoires", Lycée Pierre Corneille, Rouen — Sept 2021

- Rigorous multidisciplinary cursus, academic excellence, solving complex problems, preparation for top french prestigious engineering schools.

EXPERIENCE

Visiting student Researcher — April 2025 - August 2025
NASA Jet Propulsion Laboratory — *Los Angeles, CA*

- Enhance the cognitive architecture of LLMs through ROS Agent for more effective human-robot interaction.
- Develop new actions by integrating ROSA with robots like Spot and the JPL Rover
- Optimize workflows through prompt engineering and automation, boosting ROSA's adaptability.

Machine Learning Research Scientist Intern — Summer 2024
Airbus — *Paris, France*

- 18% reduction in machine maintenance time using Python scripts to anticipate quality drifts in the aircraft electronic board manufacturing workshop.
- Improved quality control with a JavaScript/SQL monitoring table to track failures.

LLM Research Intern — Jan 2024
Atos — *Aix-en-Provence, France*

- Training a text2SQL model with Langchain and Ollama for query generation to achieve a 90% execution accuracy
- Explored open-source Foundation models and employed HuggingFace's transformers for NLP tasks
- Developement of Retrieval-Augmented Generation (RAG) enabling conversational interactions with documents.

SELECTED PROJECTS

Build LLM from scratch Character-based LLM centered around characters, trained on a dataset including the works of Shakespeare using the Transformer framework. (GitHub Link)

ML-based Self-Diagnostic Tool for Endometriosis Advanced endometriosis diagnosis through a streamlined model, achieving an F1-score of 0.92 and accelerated diagnosis via a concise set of 24 symptoms, utilizing an 800-example dataset. (GitHub Link)

SKILLS

Python, PyTorch, TensorFlow, scikit-learn, LLama2, Mistral,LoRA, Arima, C/C++, SQL, Chroma