# Adam Rida

Data Scientist and AI Research Scientist

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*Personal website: adrida.github.io | Github : adrida | Google Scholar*

## PROFESSIONAL EXPERIENCE

**Entrepreneur First**                                                                                       **Paris, France / San Francisco, USA**
*Co-founder and CTO - SynthAI*                                                                                              05/2024 - 09/2024
- Developed an AI co-pilot for investment thesis generation in private equity, releasing three live prototypes to over 100 private equity funds.
- Engineered a proprietary PDF parser and innovative multi-document summarization techniques using knowledge graphs (GraphRAG and Multi-headed RAG).
- Led product design, development, and AI research, addressing RAG limitations in summarization.

**MFG Labs**                                                                                                                   **Paris, France**
*Data Scientist*                                                                                                              11/2023 - 04/2024
- Optimized supply chain operations for a luxury brand using AI, tackling data scarcity challenges.
- Designed strategies to minimize stockouts while effectively meeting customer demand.

**AXA / Sorbonne University – CNRS**                                                                                            **Paris, France**
*AI Research Scientist - Ph.D. Candidate*                                                                                      10/2022-10/2023
- Conducted research on Responsible and Explainable AI within AXA's R&D team.
- Developed new approaches for differential explanations to interpret differences between models.
- Authored a research paper accepted at ECML/PKDD 2023 workshop.

**Société Générale Corporate and Investment Banking - SGCIB**                                                                   **Paris, France**
*Data Scientist, Apprenticeship – Fixed-Term contract*                                                                         09/2021-09/2022
- Created predictive analytics tools and dashboards for sales teams, boosting performance significantly.
- Processed large datasets (>20M rows monthly) using PySpark and Kedro.
- Implemented code guidelines and team management processes for a team of seven.

**Rebellion Research AI Asset Management**                                                                                 **New-York City, USA**
*Machine Learning Quantitative Researcher, Internship*                                                                         02/2021-09/2021
- Constructed deep reinforcement learning investment strategies, achieving a 21% annualized return and 1.8 Sharpe Ratio.
- Engineered features from SEC 13-F filings to enhance model performance.
- Published essays on AI and cryptocurrency, reaching over 100,000 readers.

**Qantev**                                                                                                                     **Paris, France**
*Data Scientist, Internship*                                                                                                   04/2021-08/2021
- Achieved 97% accuracy in medical insurance NLP models, up from 70%.
- Optimized data processing architecture, increasing speed by ~70%.
- Collaborated in an agile, test-driven environment with high code standards.

*Software Engineer, Internship*                                                                                                06/2020-10/2020
- Implemented front-end views in collaboration with the UI/UX team using React JS and Python.

## EDUCATION

**Sorbonne University – CNRS - LIP6 – AXA**                                                                                     **Paris, France**
*Ph.D. Candidate in Computer Science – Artificial Intelligence*                                                                      2022-2023
- Specialized in Explainable AI (XAI) focusing on differential explanations between models.
- Part of the AXA-Sorbonne University Trustworthy and Responsible AI Lab (TRAIL).
- Transitioned to industry after one year.

**CY Cergy Paris Université - CY Tech (ex EISTI - École d'Ingénieur - )**                                                       **Cergy, France**
*Master's degree in Applied Mathematics and Data Science – (Diplôme d'Ingénieur)*                                                    2017-2022
- Ranked in the top 8% with a grade of 16/20 (Grade A).
- Relevant Coursework: Machine Learning, Deep Learning, Statistics, Econometrics, Time Series Forecasting, Optimization, Artificial Intelligence, Databases.
- Master's Project: Time series forecasting of SWIFT transactions and the impact of macroeconomic indicators at Société Générale.

**Ecole 42**                                                                                                                   **Paris, France**
*Intensive 3-year program (Ranked 24th over 900 applicants - Hackathon format)*                                                      2017-2020
- Studied algorithms and C programming through peer-to-peer, project-based learning.
- Ranked 24th out of 900 applicants in a competitive one-month programming session.

**Lycée Charlemagne**                                                                                                        **Paris 4, France**
*High School degree - Among top Parisians high schools - French Baccalauréat with Honors, Mention Bien (14.5/20)*                        2016

## SKILLS

**Data Science and AI:** Explainable AI (XAI), Machine Learning and Deep Learning, Deep Reinforcement Learning, LLM engineering (RAG pipelines, Langchain, etc), NLP (Topic Modelling, transformers, Bert), Data Processing

**Programming languages:** Python (Numpy, pandas, scikit-learn), R, Java, C, Scala, SQL

**Frameworks and tools:** TensorFlow, PyTorch, Keras, Kedro, PySpark, Gradio, React, Dash

**Languages:**
- French: Native
- English: Fluent (Toeic 965/990)
- Spanish: Conversational

**PUBLICATIONS AND PROJECTS (all links, more details and access to code at [adrida.github.io](adrida.github.io))**

- **Dynamic Interpretability for Model Comparison via Decision Rules**, Adam Rida, Marie-Jeanne Lesot, Xavier Renard, Christophe Marsala; ECML/PKDD 2023 DynXAI Explainable Artificial Intelligence: From Static to Dynamic Workshop
- **Deep Reinforcement Learning & Feature Extraction For Constructing Alpha Generating Equity Portfolios**, Alexander Fleiss*, Amrith Kumaar*, Adam Rida*, Junsup Shin, Xinying Lai, Vivian Fang, Jialiang Chen, Ang Li:: SSRN (> 200 downloads *:equal contributors)
- **Temporal Augmented Retrieval (TAR)** - Dynamic RAG (Open Source Project - 21 stars on Github)
- **Published essays**
  - "What is Explainable AI?", Rebellion Research, 2021
  - "Why Does Nobody Want Crypto?", Rebellion Research, 2021
  - "1636 Tulip Mania, GameStop, Crypto, and Social Media", Rebellion Research, 2021
  - "Should We Aim For Humain-AI Coordination Instead Of Human-AI Confrontation?", Rebellion Research, 2022
- **Web3 Projects:**
  - Developed projects with over 3,000 users and achieved multi-million-dollar market caps (details available upon request to protect anonymity)

**ADDITIONAL INFORMATION**

**References:** Available upon request.

*Note: All links, more details, and access to code are available on my personal website.*