

Adam Rida

Data Scientist and AI Research Scientist

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Personal website: adrida.github.io | Github : [adrida](https://github.com/adrida) | [Google Scholar](https://scholar.google.com/citations?user=adrida)

PROFESSIONAL EXPERIENCE

Entrepreneur First

Paris, France / San Francisco, USA

Co-founder and CTO - SynthAI (Startup killed by a bigger competitor: Hebbia)

05/2024 - 07/2024

- CTO of a pre-seed B2B SaaS start-up developing an AI co-pilot for investment thesis generation in Private Equity
- Focused on product design, development and applied/fundamental AI research to solve RAG limitations for multi-document summarization
- In 2 months, developed alone the first 3 live prototypes released to 100+ PE funds (Python - Gradio) - including a proprietary state of the art PDF parser, a custom RAG pipeline and a novel approach for multi-doc insight extraction using knowledge-graphs (graphRAG and Multi-headed RAG)

MFG Labs

Paris, France

Data Scientist

11/2023 - 04/2024

- Worked on AI-driven supply chain optimization for a luxury brand, addressing data scarcity challenges
- Developed foundational AI models, automating stock management and optimizing order processes
- Designed strategies to mitigate luxury inventory constraints, minimizing stockouts while meeting customer demand effectively

AXA / Sorbonne University – CNRS

Paris, France

AI Research Scientist - Ph.D. Candidate

10/2022-10/2023

- Worked within AXA's R&D team with a team of AI researchers on topics around Responsible and Explainable AI
- Worked on building interpretable explanations to describe the differences between different models
- Performed a full literature review on the XAI methods for model comparison
- Created a new approach for differential explanations as well as a new algorithm to generate them
- Research paper accepted at a conference workshop (ECML) detailing the proposed approach

Société Générale Corporate and Investment Banking - SGCIB

Paris, France

Data Scientist, Apprenticeship – Fixed-Term contract

09/2021-09/2022

- Early member of the Global Transaction Banking division's DataLab (GTPS) helping it to scale and handle more than 4 use cases
- Working on creating predictive, optimization tools and dashboards for the sales teams based on the corporate clients' transactions and financial data. (Forecasting models, Python: TensorFlow, Scikit-learn, Dash) increasing the sales teams performance significantly
- Contributed and designed both the data and the software architecture (large dataset processing using pySpark and Kedro >20M rows monthly)
- Led the implementation of code guidelines and tech team management processes on a team of 7 persons (tasks, GitHub PR, newcomers handling,...)

Rebellion Research AI Asset Management

New-York City, USA

Machine Learning Quantitative Researcher, Internship

02/2021-09/2021

- Constructed deep reinforcement learning-driven investment strategies based on factors extracted from SEC 13-F filings in Python, which outperformed the S&P 500 and achieved a 21.0% annualized return, 1.8 Sharpe Ratio (Published Research Paper)
- Worked on modeling the trading strategy as an agentic problem to help capture more complex behavior in the data
- Performed feature engineering on the 13-F data which generates features such as fund positions on stocks, idiosyncratic risk, corresponding quarterly position changes, the number of funds that held a specific stock in the past quarter
- Demonstrated the ability to apply advanced deep reinforcement learning algorithms to real-world problems
- Worked closely with the CEO, Alexander Fleiss, and published essays on AI and cryptocurrency on the company's website, receiving a 100,000+ readership.

Qantev

Paris, France

Data Scientist, Internship

04/2021-08/2021

- Created and implemented Machine learning and NLP models on medical insurance data – reached an accuracy of 97% instead of the previous 70%
- Worked closely with the head of data science and the CTO, Hadrien De March (Ph.D. in Optimal Transport theory)
- Worked on deep data processing and architecture refactoring operations, increasing processing speed by around 70%
- Worked in an agile and test-driven environment with high clean code standards in a large codebase

Software Engineer, Internship

06/2020-10/2020

- Worked closely with the UI/UX team to implement and deploy the different views in the front-end (React JS, Python)

EDUCATION

Sorbonne University – CNRS - LIP6 – AXA

Paris, France

Ph.D. Candidate in Computer Science – Artificial Intelligence

2022-2023

- Transitioning to the industry after one year
- Ph.D. in Explainable AI (XAI) and more specifically in building differential explanations to interpret and understand differences between models.
- Part of the joint laboratory AXA-Sorbonne University Trustworthy and Responsible AI Lab (TRAIL)

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 with Grade de Master)

2017-2022

- Selective curriculum – Ranked in the top 8% of the promotion – Grade: A (16/20)
- Relevant Coursework: Machine and Deep Learning, Probabilities, Statistics, Econometrics, Linear Algebra, Time series and Forecasting Models, Optimization, Artificial Intelligence and Heuristics, Computer Science, Databases
- Master's project: Time series Country forecast of SWIFT transactions and study of the impact of macroeconomic indicators - Société Générale

Intensive 3-year program (Ranked 24th over 900 applicants - Hackathon format)

2017-2020

- Studied Algorithms and C programming. Training is inspired by new modern ways to teach, which include peer-to-peer pedagogy and project-based learning
- Admissions are done through 1 month of intensive programming and projects (10h/day including weekends)

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), Data Processing, Machine learning, Deep Learning, Deep Reinforcement Learning (Python: NumPy, Pandas, Scikit-learn; R), NLP (Topic modeling, Transformers, Bert)

Machine Learning Tools: Familiar with common ML tools, architectures, and workflows, including TensorFlow, PyTorch, and Keras.

Software Engineering: Procedural, functional, object-oriented programming (C, Java, Python, Scala, React, Dash, Web ...)

Languages:

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

PUBLICATIONS AND SIDE PROJECTS (all links, more details and access to code at 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 - 18 stars on Github)
- **"What is Explainable AI?"**, Rebellion Research, 2021 (Published Essay)
- **"Why Does Nobody Want Crypto?"**, Rebellion Research, 2021 (Published)
- **"1636 Tulip Mania, GameStop, Crypto, and Social Media"**, Rebellion Research, 2021 (Published)
- **"Should We Aim For Humain-AI Coordination Instead Of Human-AI Confrontation?"**, Rebellion Research, 2022 (Published)
- Worked on various web3 projects with more than 3,000 users and reached multi-million dollars market caps.(Side projects)

REFERENCES

Alexander Fleiss – CEO of Rebellion Research: alex@rebellionresearch.com Maria Malek - Professor and researcher at CY Tech: [mma@cy-tech.fr](mailto:mmma@cy-tech.fr)
 Hadrien De March, Ph.D. – CTO of Qantev: hadrien.de.march@qantev.com