Matteo Villosio

ARTIFICIAL INTELLIGENCE SPECIALIST @ TINEXTA | ADVISOR @ DATAAIMED | MEMBER @ GLOBALAI ASSOCIATION

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Experience

Tinexta Group Remote

• Lead the development of two now available Generative AI solutions (RAG, Multiagent, Graph-based).

- Proven ability to effectively communicate complex AI solutions to clients, ensuring their needs are met and fostering strong, collaborative relationships
- Mentoring of 2 juniors.

AI ADVISOR

Lead two classes introducing the use of LLMs to technical stakeholders.

Remote

Mar 2025 - Now

ARTIFICIAL INTELLIGENCE SPECIALIST

May 2024 - Mar 2025

June 2024 - Now

Nov. 2022 - May 2024

- Implemented multiple LLM Agent and Multiagent Solutions.
- Improved the performances of our search pipelines of more than 50%.
- Lead the creation of an ElasticSearch Database currently storing more than 100 Milions Legal Documents
- Created more than 20 high performance **ElasticSearch** queries, lowering the latency of more than 30% with respect to the previous solutions.

DatAIMed Remote

• Provided **strategic Al guidance** to enhance proprietary solutions.

- Led cross-functional teams in AI project implementation.
- Cultivated **strategic partnerships** with healthcare institutions.
- Strategically **led talent acquisition** to build a high-performing team.
- Lead the development of a multi-collection MongoDB-based vector Database capable of storing millions of scientific papers.

GlobalAI Geneva, Switzerland

MEMBER April 2024 - Now

- Promoted ethical AI development and sustainable growth through international representation.
- Empowered members by providing a unified voice at the United Nations and global institutions.
- Advocated for favourable regulatory environments for AI technologies worldwide.

Greenomy Bruxelles, Belgium

NLP Data Scientist

Lead the development of Artemis, the Al Advisor by Greenomy.
Won 2nd place at the Swift Hackathon "Let's innovate for a sustainable future"

- Wolf zha piace at the Switt Hackatholi Let Silliovate for a sustainable future
- Implemented multiple LLM usecases, both based on Agent and RAG architectures

- Onboarding and Mentoring of new joiners.

Generali Assicurazioni Milan, Italy

GROUP AUDIT DATA SCIENTIST

Apr. 2022 - Nov. 2022

- Responsible of Data Science operations @ Group Audit
- Design and implementation of Machine Learning, Deep Learning and NLP architectures applied to Auditing and Control functions.
- Exploration of structured and unstructured data and ETL pipeline design.

Mediolanum Group - Flowe Greater Milan Area, Italy

• Design and creation of ETL Pipelines and their implementation using PySpark

 Data Engineer
 Oct. 2021 - Apr. 2022

• Design and implementation of Machine Learning and Deep Learning architectures

EisWorld Turin, Italy

DATABASE ARCHITECT & FULL STACK DEVELOPER INTERN

Apr. 2019 - Jul. 2019

• Database design for internal compliance and Dashboard full stack development.

Education

PoliTO - Polytechnic University of Turin

Turin, Italy

MSc in Data Science and Engineering

Sep. 2019 - Dec. 2021

- Graduation Mark 100, focus on Machine Learning ∩ Social Networks ∪ Security ∪ Statistics and Statistical Programming.
- Master's Thesis about Social Network Popularity Prediction supervised by SmartData's Prof. Luca Vassio.

PoliTO - Polytechnic University of Turin

Turin, Italy

BSc in Computer Engineering

Sep. 2015 - Jul. 2019

- Curricular Internship @ EisWorld as Database architect
- $\bullet \ \ \textbf{Computer Science} \cup \textbf{Networking} \cup \textbf{Electronics}$

Languages

• English: Fluent, CAE, upper C1 • Italian: Native speaker • French: Lower Intermediate

Notable Projects.

ErisForge: Behavior Control for LLMs

- Over 200 stars on GitHub and 100 Points on HarckerNews
- Python library for modifying Large Language Models (LLMs) by ablating or inducing specific behaviors through internal direction manipulation.
- · Compatible with almost any transformer-based LLM, avoiding reliance on transformer lenses or architecture-specific tools.
- Useful for refusal behavior control, tone/personality customization, censorship research, and adversarial testing.
- · Check me out

Haystack Documentation AI Agent

- · GenAl Powered Agent capable of surfing the documentation of the famous Haystack Library and help and write code for the user.
- · Completely stateless
- · Based on Haystack and Streamlit
- · Check me out

KomPY: Python Wrapper for Komoot APIs

- Python wrapper for Komoot APIs: defines datatypes and objects to have a Pythonic experience with Komoot APIs.
- Streamlined integration with the most used python geospatial libraries.
- · Check me out

iCarl - Incremental Learning SOTA Improvement

PoliTO, Graded 27/30

- Re-implementation of State of the Art iCarl deep learning classification training strategy using Pytorch and Scikit-learn.
- Improvements of SOTA results by means of image clustering and averaging.

Certifications

Building GenAl Applications with MongoDB 2024 Course on leveraging knowledge graphs in retrieval augmented generation (RAG) applications. MongoDB University Course on creating GenAl applications using MongoDB Atlas Vector **EU Taxonomy and Sustainable Finance** 2023 Search, focusing on semantic search, chatbot development, and Greenomy Academy Retrieval-Augmented Generation (RAG) with MongoDB and Course regarding EU Taxonomy Regulation and how to LangChain. successfully implement reporting requirements Multi AI Agent Systems with crewAI 2024 The Materiality of ESG Factors 2023 DeepLearning.ai The Wharton School Course on designing effective AI agents and organizing multi-agent Specialization focused on Finance, Sustainability and ESG teams to automate business processes using CrewAl framework. **Natural Language Processing Specialization** 2022 **Agentic Design Patterns with AutoGen** 2024 DeepLearning.ai DeepLearning.ai Specialization regarding all technical and theoretical aspects of Course on building and customizing multi-agent systems using AutoGen, a framework for developing LLM applications with **R Programming** 2021 collaborative agents. Johns Hopkins University **Knowledge Graphs for RAG** 2024

Deenlearning ai

DeepLearning.ai

The course covers practical issues in statistical computing

Volunteering

Member

April. 2024 - Present

GlobalAI Association

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- Advocated for favourable regulatory environments for AI technologies worldwide.

Head of Hub

FAMITS

Feb. 2022 - Dec 2023

- Counseling and Mentoring of highschool students
- Organization of events and activities
- Management of a Team of more than 10 people

Librarian 2012 - 2014

Carlo Levy City Library

- Assistance for the user of the library and book cataloguing
- Creation for user manuals for technological devices
- Start up of the e-book program, allowing users to borrow both devices and e-book files