# Nicola Rapacchiani

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Languages: English/Italian/Spanish

## Profile

Data Science & AI expert with practical experience developing AI-powered solutions and automation systems. Skilled in building predictive models, NLP pipelines, and workflow automation to enhance operational efficiency and decision support. Published research in applied AI and delivered AI-driven process improvements for small businesses through automation and data integration.

## Skills & Abilities

- Design AI-driven workflows to automate business processes and improve efficiency
- Translate business needs into practical data and AI solutions
- Build dashboards and reporting tools to support decision-making
- Clean and integrate data from multiple sources for analysis and automation
- Deploy solutions using Python, SQL, Power BI, APIs and automation tools
- Communicate insights clearly to non-technical stakeholders

## Experience

### AI-DATA EXPERT CONSULTANT | SELF-EMPLOYED | APRIL 2025 – PRESENT

- Designed and deployed automated Shopify and API-based workflows, reducing manual inventory management by ~80% and improving stock accuracy.
- Built integrated reservation tracking systems using Hostaway API and Python, consolidating multi-platform bookings into live datasets with hourly automated updates.
- Developed automated financial and performance dashboards, including property-level P&L reporting and AI-assisted invoicing workflows to streamline business operations.

### PROJECT SUPPORT OFFICE & RESEARCHER |UNIVERSITY OF EAST LONDON – DATA SCIENCE AND AI DEPARTMENT | MAY 2025 – DEC 2025

- Led applied AI research projects focused on predictive modelling and NLP for decision support.
- Developed a survival analysis (AFT-XGBoost) injury prediction model with SHAP explainability and deployed a Streamlit application integrated with a RAG + GPT assistant.
- Conducted sentiment and emotion analysis using Hugging Face models, achieving up to 98% classification accuracy.

### DATA ANALYST |TELUS INTERNATIONAL | JUL 2024 – DEC 2024

- Analyzed customer datasets using Python, SQL, and Excel, contributing to a 15% improvement in customer retention.
- Automated data validation processes and built Power BI dashboards to monitor KPIs and marketing performance.

### DATA ENGINEER - INTERNSHIP | DATART | MAY 2024 – JUN 2024

- Developed automated ETL pipelines in Azure Data Factory processing datasets up to 10GB into SQL Server environments.

- Ensured reliable data ingestion and integrity through structured validation and preprocessing workflows.

## Public Research & Applied AI-Work

### AI-BASED FOOTBALL INJURY PREDICTION (PUBLISHED RESEARCH)

- Developed a survival analysis (AFT-XGBoost) model to estimate time-to-injury using multi-source workload and performance data.
- Integrated SHAP explainability and deployed a Streamlit application with a RAG + GPT assistant for natural language risk analysis.

### AI IN EDUCATION – SENTIMENT & EMOTIONAL ANALYSIS

- Built an NLP pipeline using Hugging Face and linear models to classify and compare human vs AI-generated tweets in educational contexts.
- Achieved up to 98% classification accuracy and analyzed emotional complexity differences between AI and human expression.

## Education

### BSC DATA SCIENCE & ARTIFICIAL INTELLIGENCE – FIRTS CLASS | UNIVERSITY OF EAST LONDON | SEP 2021 – MAY 2024

- Graduated with First-Class Honours.
- Key focus areas: Machine Learning, Cloud Computing, Database Systems, Big Data, AI, and Applied Analytics.

## Activities and Interests

### Semi-Professional Football Player

- Developed tactical awareness, performance analysis understanding, and team-based decision-making under pressure.

### UEFA B Licensed Football Coach (FIGC)

- Trained in performance analysis, tactical planning, and structured player development methodologies.

### Active Member, Chess Club

- Strengthened analytical thinking, strategic planning, and problem-solving skills.