# Alessio Mancinelli

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## Personal Profile

A knowledge-hungry & music-loving young guy. Zealous about software engineering and with 3+ years of experience specialising in machine learning, Python development and Full-Stack Development. I also try to be a youtuber, gamer and guitarist. I am always focused on building innovative projects that expand my knowledge and skills.

## Education

#### **Mathematics and Computer Science Department**

MSc in Computer Science - Intelligent and Mobile Computing

- Thesis: An Argumentative Explanation of Machine Learning Outcomes 110/110 summa cum laude
- Themese: Explainable Artificial Intelligence, Machine Learning, Argumentation Framework, Knowledge Representation

#### **Mathematics and Computer Science Department**

Bachelor's Degree in Computer Science

- Thesis: Student Behaviour Models for a University LMS 108/110
- Themese: Machine Learning, Behaviour Models, Data Analysis

#### Istituto Omnicomprensivo Rosselli Rasetti

#### Scientific Diploma - Information Technology and Telecommunications

• Thesis: Artificial Intelligence - 100/100

## Work Experience

#### **Brunello Cucinelli S.p.a - Innovation Team**

Full Stack Developer

• My primary focus has been on enhancing the company's e-commerce platform, with specialized expertise in three key areas: Cookie Handling, Enhancing Site Performance, and ensuring Accessibility features for all users.

#### Muni

AI & ML Developer

- Implemented an object detection model using transfer learning on the YOLOv8 architecture able to detect a concert ticket within an image.
- Extracted information from concert tickets by applying Optical Character Recognition (OCR) and regular expressions.
- Usage of Spotify's APIs to obtain information about artists and Ticketmaster's APIs to gather information about concerts.
- Technical Skills: Python, MySQL, Sqlite, Git, Pytorch, Machine Learning, Transfer Learning, OpenCv, Pillow, Spotipy.
- · Soft Skills: Adaptability, Attention to detail, Creativity, Communication, Problem solving, Report writing

#### Micra Software & Services srl - R&D Team

Software Developer

- Member of a four-person team, I collaborated on the development of advanced Machine Learning and Natural Language Processing models to address real-world challenges within the legal field. Our team's efforts resulted in the creation of multiple models, each accompanied by a user-friendly web interface built with Angular or JSF frameworks, providing easy access to the models' capabilities.
- Technical Skills: Python, Pandas, Scikit-learn, Keras, Machine Learning, NLP, Java, HTML/CSS, Javascript, PHP, SQL, Angular, Git.
- Soft Skills: Teamwork, Adaptability, Time Management, Communication, Presentation skills, Report Writing, Organizational skills.

#### **Mathematics and Computer Science Department**

#### Researcher

- I conducted extensive research on the applications and current state of Explainable Artificial Intelligence (XAI), with a focus on identifying best practices and trends in the field. My research included evaluating existing XAI products, analyzing potential implications for the future and exploring the role of XAI in decision making, trust and transparency in AI systems.
- I delved into Explainable By Design models such as Decision Trees and Rule-based Classifiers, and applied techniques like LIME to Neural Networks and Random Forest models.
- Technical Skills: Python, Explainable Artificial Intelligence, LIME, Watson, Spacy, Knowledge Representation, Argumentation Framework.
- Soft Skills: Adaptability, Time management, Presentation skills, Communication, Problem solving, Decision making.

### **Mathematics and Computer Science Department**

Programmer

- I developed and created a custom plugin for the Moodle e-learning platform utilized by the University of Perugia.
- The plugin was designed to engage students in learning by incorporating gamification techniques.
- Technical Skills: HTML/CSS, Javascript, PHP, SQL.
- · Soft Skills: Time management, Decision making, Presentation skills, Report writing.

#### Perugia, IT Sept 2019 - July 2021

Perugia, IT Sept 2016 - Sept 2019

#### Castiglione del lago, IT

Sept 2011 - July 2016

#### Solomeo IT

### May 2023 - Current

#### Foligno, IT

Corciano, IT

Sept 2021 - May 2023

### Oct 2022 - Current

### Perugia, IT

Gen 2021 - April 2021

Perugia, IT Dec 2017 - March 2018



Publications	
Arg-XAI: a Tool for Explaining Machine Learning Results - PDF	Macao, China
Stefano Bistarelli, Alessio Mancinelli, Francesco Santini, Carlo Taticchi	31 Oct 2022
2022 IEEE 34th International Conference on Tools with Artificial Intelligence (ICTAI)	
An Argumentative Explanation of Machine Learning Outcomes - PDF	Cardiff, Wales
Stefano Bistarelli, Alessio Mancinelli, Francesco Santini, Carlo Taticchi	30 Sept 2022
Computational Models of Argument - Proceedings of COMMA 2022 Hate Speech and Stereotypes with Artificial Neural Networks - PDF	Malaga, Spain
Giulio Biondi, Valentina Franzoni, Alessio Mancinelli, Alfredo Milani	23 July 2022
Computational Science and Its Applications - ICCSA 2022 Workshops	
Behaviour Models for a University LMS - PDF	Malaga, Spain
Giulio Biondi, Valentina Franzoni, Alessio Mancinelli, Alfredo Milani	23 July 2022
Computational Science and Its Applications - ICCSA 2022 Workshops	

## Projects

### **Gender Prediction - Binary Classification**

Mathematics and Computer Science Department

- Conducted a text analysis project on written materials from five different sources to uncover patterns in relation to two predefined classes.
- Through the process of feature engineering, I have transformed the text data into a usable dataset for training a custom-built Neural Network.
- Technical Skills: Python, NLTK, Scikit-learn, Keras, Word Embedding, Neural Network, Word2Vec.

#### **Booking Manager**

Mathematics and Computer Science Department

- I developed a web application using AngularJS for managing reservations. The site was designed to be user-friendly, easy to navigate, and to provide all the necessary functionalities for customers.
- Technical Skills: HTML/CSS, Javascript, PHP, AngularJs, MySQL.

#### **Orders Management Bot**

Personal Project

- I implemented a Telegram Bot using Python that was able to manage a set of orders within a local database. The bot was designed to be easy to use and efficient, providing users with the ability to place and manage orders through a conversational interface.
- Technical Skills: Python, Sqlite, Theleton, SQL.

## Skills\_\_\_\_\_

Programming	Python (Pandas, Keras, Pytorch, NumPy, Scikit-learn, PyMongo), Java, PHP, HTML/CSS, JavaScript, SQL.
Miscellaneous	Explainable Artificial Intelligence, Machine Learning, Natural Language Processing, Angular, Latex (Overleaf), Git, Docker, Whisper.
Soft Skills	Time Management, Teamwork, Problem-solving, Documentation, Engaging Presentation, Report Writing, Critical thinking,
	Adaptability, Creativity, Attention to detail.

### Interests\_\_\_\_\_

Cooking	Passionate about cooking with expertise in Italian-style dishes, including homemade pasta.
Video Games	I always had the competitive gaming gene. I mostly play on my computer and my favorite genre is FPS.
Gym	Committed to maintaining a daily exercise routine, including outdoor activities for physical fitness and mental well-being
Music	I started playing guitar when i was 15. I love going to concerts and listening to music while i'm coding.
Youtube Videos	I opened a youtube channel where i create programming video tutorials for my little community.
Personal Finance	I like to keep track of my income and expenses. I tend to be a frugal person and an investor.

### Languages\_

ItalianMother tongueEnglishCambridge C1, Certificated

*I give consent to process my data with the purpose of the recruitment process, in accordance to the Regulation of the European Parliament 679/2016, regarding the protection of natural persons and free movement of such data.* 

#### Exam project

Exam project

Freetime project