Alessio Mancinelli

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Personal Profile

A knowledge-hungry & music-loving young guy. Zealous about software engineering and with 2+ 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. Primarily, looking for Machine Learning, Data Engineer, Python Developer roles.

Education

Mathematics and Computer Science Department
Perugia, IT

MSc in Computer Science - Intelligent and Mobile Computing
Sept 2019 - July 2021

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

Mathematics and Computer Science Department
Perugia, IT

Bachelor's Degree in Computer Science
Sept 2016 - Sept 2019

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

Istituto Omnicomprensivo Rosselli Rasetti
Castiglione del lago, IT

Scientific Diploma - Information Technology and Telecommunications
Sept 2011 - July 2016

- 100/100
- **Thesis**: Artificial Intelligence

Work Experience

Micra Software & Services srl - R&D Team
Corciano, IT

Software Developer
Sept 2021 - Current

- 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.
- Led the innovation of existing products by integrating conversational chatbots and custom-built Name Entity Recognition Systems using the Spacy library, TINT and Rasa. These enhancements greatly improved the functionality and user experience of the products.
- **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.

Muni
Foligno, IT

AI & ML Developer
Oct 2022 - Current

- 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

Mathematics and Computer Science Department
Perugia, IT

Researcher
Gen 2021 - April 2021

- 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
Perugia, IT

Programmer
Dec 2017 - March 2018

- 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.

Publications

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   *Exam project*

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   *Exam project*

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   *Freetime project*

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

Italian	Mother tongue
English	Professional proficiency