

VINCENZO COLELLA

Data Scientist and AI Engineer

✉ vincenzo.colella@hotmail.com
☎ +41762286478

📍 Lausanne, Switzerland (B Permit)
🌐 cutt.ly/vincenzocolella

📅 27/09/1997
🌐 cutt.ly/vincenzolinkedin



Artificial Intelligence and Data Engineer currently employed at Argusa in Lausanne, Switzerland. Holds Master's degree in 'Artificial Intelligence and Robotics' at Sapienza University in Rome. Holds certifications in Tableau Desktop Specialist, Snowflake SnowPro Core, and AWS Academy Cloud Fluent in Italian, French, English, and Portuguese.

WORK EXPERIENCE

Data Consultant

Argusa, SA

📅 2023 - Present

📍 Lausanne, Switzerland

- Working as lead Data Scientist and Data Engineer for a leading rail maintenance company in Bussigny, Switzerland.
- Designed and published interactive Tableau dashboards, enhancing data visualization and decision-making processes.
- Developed a custom Streamlit application to streamline Snowflake data management, facilitating real-time data access and manipulation.
- Oversaw the migration of company data to the Snowflake Warehouse, using Data Vault Builder.
- Employed Python for advanced data analytics and lineage.
- **Tableau, Snowflake, Data Vault Builder, Python, Streamlit**

EDUCATION

M.Sc. in Artificial Intelligence and Robotics

Sapienza University of Rome

📅 2020 - 2022

📍 Rome, Italy

- Master of Science in Computer Engineering with a specialization in Artificial Intelligence and Robotics, entirely taught in English, consisting of 120 CFU.
- Relevant Courses: **Machine Learning, Artificial Intelligence, Neural Networks, Autonomous and Mobile Robotics, Reinforcement Learning, Neuroengineering, Cloud Computing, Computer Vision.**

Erasmus Program

Czech Technical University

📅 2019

📍 Prague, Czech Republic

- Spent a semester at the IT Faculty of the CTU, gaining exposure to new academic environments and cultures.

Bachelor of Computer Science

Sapienza University of Rome

📅 2017 - 2020

📍 Rome, Italy

- Completed a comprehensive Computer Science program with a focus on Data Science and Artificial Intelligence, totaling 180 CFU.
- My final thesis centered on a Natural Language Processing (NLP) model for sentiment analysis, capable of autonomously assigning a rating (1 to 5) to any text after being trained on 10,000 reviews scraped from Amazon.

ACADEMIC PROJECTS

- All my academic projects are available at github.com/vincenzocolella

Master Thesis

Italian National Institute of Nuclear Physics

📅 2022

- **An Enhanced Architecture for Accelerating Magnetic Resonance Imaging Based on Res-U-Net** : My thesis project focused on designing and implementing a neural network architecture, starting from a Residual U-Net, to reconstruct undersampled brain MRI data, thus accelerating the sampling duration. My work led to significant scan time reductions by factors 4x and 8x, with a reconstruction accuracy of approximately 90%. I had the opportunity to collaborate with the Italian National Institute of Nuclear Physics, which provided the hardware for training the models, and with Mr. Giagu, a CERN engineer who supervised my work.

Machine Learning Projects

Sapienza University of Rome

📅 2020-2022

- **Fighting Fake News** : Implemented a self-supervised neural network that was able to detect spliced (modified) images.
 - **Attention2Angio** : Implemented a GAN-based model with attention mechanism for Synthesizing Fluorescein Angiography.
 - **Robotics for Human Interaction** : Designed an algorithm that allows a Pepper robot to communicate with humans and show them the fastest path to their goal location, using Pepper SDK and planning algorithms.
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- Developed various projects in relational databases, embedded systems, web, graphics, and mobile application development.
 - Led the following academic seminars :
 - 'EPSRC Principles of Robotics'
 - 'Balancing Explicability and Explanations for Human-Aware Planning in Robotics'
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- Participated in the Oxford Machine Learning Summer School - OxML 22 (Health Track) organized by the University of Oxford and the Machine Learning Summer School at Nanyang Technological University in Taipei, Taiwan in 2021

DIGITAL SKILLS

- **Programming** : Python, Java, SQL, C++, PHP, JavaScript, C, Bootstrap, Node.js, Arduino, SPARQL
- **Data** : Tableau, Snowflake, Streamlit, Datavault Builder, Pandas, Excel
- **Machine Learning** : Tensorflow, PyTorch

INTERNATIONAL EXPERIENCE

- Born in the **United States of America** (1997-1999), lived in various countries during formative years, enriching experience with diverse cultures and customs. Early childhood in **Italy** (1999-2004), primary education in **Brasilia, Brazil** (2004-2008), middle school in **Geneva, Switzerland** (2008-2012). Pursued bachelor's degree in **Rome, Italy**, spending one semester in **Prague, Czech Republic** (2018-2019). Completed master's degree in **Rome**. Relocated to **Lausanne, Switzerland** in 2023.
- Furthermore, my family's diplomatic relocations to **Norway** and, more recently, **Costa Rica**, have provided me with even more opportunities to experience and adapt to different cultural environments.