

VINCENZO COLELLA

Artificial Intelligence and Data Engineer

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I am an Artificial Intelligence and Data Engineer, currently working at Argusa in Lausanne, Switzerland. I completed my Master's in 'Artificial Intelligence and Robotics' at Sapienza University in Rome. My thesis was conducted in collaboration with the Italian National Institute of Nuclear Physics, focusing on MRI acceleration through neural networks.

Thanks to my international background, I am fluent in Italian, French, English, and Portuguese.

I am a Certified Tableau Desktop Specialist and Snowflake SnowPro Core.

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 data management from Snowflake, facilitating real-time data access and manipulation.
- Oversaw the migration of company data to the Snowflake Warehouse, utilizing 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

Università degli Studi di Roma "La Sapienza"

📅 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

Università degli Studi di Roma "La Sapienza"

📅 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 academical 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, 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

Università degli Studi di Roma "La Sapienza"

📅 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 app development.
 - Led the following academical seminars :
 - 'EPSRC Principles of Robotics'
 - 'Balancing Explicability and Explanations for Human-Aware Planning in Robotics'

LANGUAGES

Italian
French
English
Portuguese



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

- I was born in the **United States of America** (1997-1999) and have had the privilege of living in various countries during my formative years, enriching my experience with diverse cultures and customs. My early childhood was spent in **Italy** (1999-2004). I completed my primary education in **Brasilia, Brazil** (2004-2008) and attended middle school in **Geneva, Switzerland** (2008-2012). Following this, I moved to **Rome, Italy**, where I pursued my bachelor's degree and spent one semester in **Prague, Czech Republic** (2018-2019), as part of my studies. After completing my masters degree in **Rome**, in 2023 I relocated to **Lausanne, Switzerland**.
- Furthermore, my family's recent relocations to **Norway** and, more recently, **Costa Rica**, where my father serves as italian ambassador, have provided me with even more opportunities to experience and adapt to different cultural environments.

ADDITIONAL EDUCATION

Snowflake SnowPro Core Certification Exam

Snowflake

📅 01/2024

- Achieved the Tableau Desktop Specialist Certification, demonstrating advanced skills in Tableau Desktop functionalities, data visualization, and dashboard creation.
 - Certificate link: SnowPro Core Certification
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Tableau Desktop Specialist Certification

Tableau Software

📅 09/2023

- Achieved the Tableau Desktop Specialist Certification, demonstrating advanced skills in Tableau Desktop functionalities, data visualization, and dashboard creation.
 - Certificate link: Tableau Desktop Specialist Certification
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Oxford Machine Learning Summer School - OxML 22 (Health Track)

University of Oxford

📅 2022

📍 Oxford, England

- In-depth study of key concepts and techniques in Machine Learning, with a focus on applications in medical AI.
 - Certificate link: OxML 22 Certificate
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Machine Learning Summer School

Nanyang Technological University

📅 2021

📍 Taipei, Taiwan

- Intensive participation in a summer course focusing on advanced topics in Machine Learning, taught by internationally renowned lecturers.
 - Certificate link: NTU Certificate
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AWS Academy Graduate - AWS Academy Cloud Foundations

AWS Academy

📅 2022

- Completion of the course on managing and implementing cloud services on AWS, gaining fundamental skills for cloud architecture.
- Certificate link: AWS Academy Certificate