Daniele **Avolio**

MSc in Computer Science & AI · Data Engineer

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Education

Unical (University of Calabria) *Cosenza, Italy*
M.S. in Computer Science and Artificial Intelligence - 110/110 *Sep. 2022 - Apr. 2025*

- Advanced Computer Science courses, focusing in Artificial Intelligence, Data Engineering and Big Data.
- Hands-on experience with state-of-the-art technologies and methodologies, including Machine Learning, Deep Learning, and Data Architectures.
- Thesis project: *LLM integration in Data Migration and Integration processes.*

Instituto Superior Técnico *Lisbon, Portugal*
Erasmus+ Student *Apr 2024 - Jul 2024*

- Advanced courses in Computer Science and Artificial Intelligence with a focus on Machine and Deep Learning.
- Expanded knowledge in state-of-the-art AI technologies and methodologies.
- Created a network of international contacts with students and professors.

Unical (University of Calabria) *Cosenza, Italy*
B.S. in Computer Science - 94/110 *Sep. 2018 - Apr. 2022*

- Solid basis in Programming, Software Engineering, Web Development, and Artificial Intelligence.
- Thesis project: Fullstack web application for the management of a students social network.

Experience

Lutech S.p.A. *Cosenza, Calabria*
Data Engineer - Internship *April 2025 - Present*

- Databricks and SQL Migration of legacy ETL pipelines to a new architecture.
- Tech: Python, OpenAI API, Databricks, SQL, Spark, PySpark, Azure.

Lutech S.p.A. *Cosenza, Calabria*
Data Integration Engineer - Internship *October 2024 - March 2025*

- Extended and optimized an internal software for legacy XSLT transformations in DataWeave, improving performance using OpenAI API integration.
- Developed internal tools for optimizing manual repetitive tasks
- Reduced manual data-mapping from 2 hours to 30 minutes using OpenAI API.
- Tech: Mulesoft, Python, Streamlit, OpenAI API, DataWeave, LLM.

IET s.r.l. *Rende, Calabria*
Frontend Developer *May 2022 - Ago. 2022*

- Collaborated in designing and developing a custom Angular ngMaterial library to enhance UI components for internal company applications.
- Developed and maintained a scalable internal application using Angular and Tailwind CSS, creating custom survey applications for clients, being free from third-party services.
- Refactored and optimized legacy codebases, implementing new features ensuring scalability for future updates.

Projects

Immersivaudio
Instituto Superior Tecnico

- Developed an audio generation application based on state-of-the-art deep learning models with Python.
- Enabled audio generation from videos/images and deployment to Hugging Face Spaces using Gradio.
- Tech: Python, PyTorch, Gradio, Hugging Face, Transformers.

USA School Shootings Analysis
M.S. Unical

- Built a data warehouse on USA school shootings using Kaggle data (1970-2022).
- Utilized Pentaho for ETL processes and Tableau for data visualization and analysis.
- Tech: Python, Pentaho, Tableau, Data Warehousing, Data Analysis.

Skills

Big Data	Apache Spark, PySpark, Hadoop (HDFS, Hive), Delta Lake, Databricks, ETL Pipelines, Data Warehousing, SQL/NoSQL, Data Lakes, Azure, Pentaho
ML	Pandas, NumPy, Scikit-learn, TensorFlow, Keras, PyTorch, Matplotlib, OpenCV, NLTK, Transformers, Gradio
Programming	Python, Java, JavaScript, TypeScript, C++, Bash, Docker, Git, Node.js, HTML5, CSS3, Svelte, Angular, TailwindCSS, Bootstrap, Firebase
Soft Skills	Problem Solving, Teamwork, Communication, Time Management, Adaptability, Creativity
Languages	Italian (Native), English (Fluent)

Honors & Awards

2023	**Best Master Student**, M.S. in Computer Science and Artificial Intelligence	*Unical*