Antonio Guadagno

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Experience

Junior Data Engineer Jan 2023 – Current

Quantyca S.p.A. *Monza*

- Implemented ETL processes using SQL to transform and load data from AWS S3 into the client's data warehouse.
- Developed two Python scrapers to extract data from web sources, storing the collected information on AWS S3.
- Collaborated in the creation of the client's data platform, leveraging Terraform to provision and maintain AWS resources.

Research Thesis - Deep Learning Mar 2022 – Dec 2022

Politecnico di Milano *Milan*

- Implemented and compared various deep learning neural networks for anomaly detection.
- Developed the final model as an LSTM Autoencoder with Variational Self-Attention.
- Improved the state of the art by 2% on the F1 score (0.89 vs 0.91) and by 6% on recall (0.89 vs 0.94).
- Python, TensorFlow, Keras, Sklearn, Numpy and Pandas have been used.
- Supervisors: Francesco Amigoni (Politecnico di Milano).

Projects

Multivariate Time Series Forecasting | *Python, TensorFlow, Keras, Sklearn, Numpy, Pandas*

- Implemented various deep learning neural networks for multivariate time series forecasting.
- Developed the final model using Convolutional Layers and LSTM layers.
- Tested Seq2Seq models with Attention mechanism.

Leaf classification via Deep Learning Neural Networks | *Python, TensorFlow, Keras, Sklearn, Numpy, Pandas*

- Implemented various deep learning neural networks for leaf classification from photographic inputs.
- Developed the final model using transfer learning and fine-tuning from ResNet50.
- Data Augmentation techniques have been used to reach an accuracy of 91%.

TV-Series Recommender System | *Python, Pandas*

- Implemented a recommender system algorithm for TV series recommendations. MAP of 0.48.
- Created final hybrid algorithm by combining SLIM, PureSVD and Matrix Factorization (IALS)

Education

Politecnico di Milano Milan, Italy

MSc in Computer Science and Engineering *Sep 2020 – Dec 2022*

- Grade: 110/110 cum Laude - GPA: 29.3/30
- Main Courses: Artificial Intelligence, Artificial Neural Networks and Deep Learning, Recommender Systems, Data Mining, Advanced Databases, Advanced Software Engineering

Certificates

- "Supervised Machine Learning: Regression and Classification" by DeepLearning.AI and Stanford University
- "Process Data from Dirty to Clean" by Google
- "Modernizing Data Lakes and Data Warehouses with Google Cloud" by Google

Awards

- Scholarship for Academic Excellence at Politecnico di Milano (2021 and 2022)

Hobbies

- I run a YouTube channel focused on artificial intelligence, where I upload videos for educational outreach purposes.