

GIANLUCA GUARRO

Los Angeles

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Experience

Sonos

June 2022 – Present

Data Scientist

Remote

- Implemented and deployed on AWS a suite of predictive models aimed at understanding historical demand for new product launches with limited visibility across our various regions and business verticals. Through extensive feature engineering, model exploration, and hyperparameter tuning, the models have yielded average R^2 scores of up to 0.90.
- Developed a hybrid forecasting strategy which improved demand forecasting accuracy by 26%. I deployed the model as part of an end-to-end forecasting pipeline on AWS such that new forecasts are generated as soon as new data is made available.
- Consulted highly technical research papers to implement a strategy to infer causality between non-stationary time series variables.
- Transformed business-critical telemetry data into a functional and efficient representation to support other data analysts / scientists across the organization.

ASCA, Inc

July 2016 – May 2022

Project Engineer / Software Developer

Redondo Beach, California

- Developed an application for NASA Kennedy Space Center that allows for the intuitive development and utilization of probabilistic risk models (event tree / fault tree PRA models) used for the launch approval of nuclear powered NASA planetary missions.
- Revamped the company's bayesian belief network (BBN) analysis software by increasing functionality and furnishing it with a modern graphical user interface.
- Performed a variety of tests and debugging assignments on the company's multi-valued logic analysis and discrete simulation software to improve functionality and verify results.

BIP

Sep 2020 – Feb 2021

Data Science Intern

Milan, Italy

- Performed a variety of web-scraping, data-cleansing, and data-exploration tasks to generate large datasets using Python, SQL, and NoSQL to be used in downstream machine learning projects.
- Researched, implemented, and assessed the viability of various image recognition algorithms.

Education

Polytechnic University of Milan

2018 – 2021

Master of Science in Computer Science and Engineering (105/110)

Milan, Italy

Data Mining, Artificial Intelligence, Machine Learning, Natural Language Processing, Recommender Systems

California State University Long Beach

2017 – 2018

Post-Bachelor in Computer Science (4.0 GPA)

Long Beach, California

University of California Santa Barbara

2012 – 2016

Bachelor of Science in Physics (3.4 GPA)

Santa Barbara, California

Projects

Book Success Predictor (MS Thesis) | Python, Pytorch

Feb 2021 – Oct 2021

- Developed a powerful LLM capable of predicting successful novels with a F1 score of 73.6% on a benchmark dataset.
- Performed state of the art research and implemented several neural architectures to study their efficacy for the problem at hand.
- Studied and experimented with several training techniques to improve performance. These techniques include within-task pretraining, in-domain pretraining, and multitask fine-tuning
- LLMs, BERT, Transformers, Transfer-Learning, NLP, SVMs, Deep Learning, Applied Research.

Movie Recommender System | Python, Cython, Scikit-Learn

Feb 2022 – June 2022

- Boosted performance of recommender by 15% by scraping and cleaning additional relevant information from IMDB.
- Exceeded performance of baseline recommender system by over 55%.
- Compiled, organized, and analyzed several experiments including analyses of Non-Personalized, Heuristic, Matrix Factorization, and Graph-Based techniques suited for building recommender systems.

Technical Skills

Programming: Python, SQL, Visual Basic, JavaScript, HTML/CSS, C++

Tools and Technologies: Linux, Git, AWS, SageMaker, DBT, Tableau

Languages: English (Mother Tongue), Italian (Advanced), Spanish (Beginner)