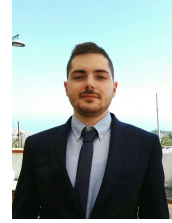


Gabriele Mosaico

Curriculum Vitae



Experience

- Mar - Aug 2020 **Visiting Scientist**, *algoWatt*, Genova.
Italian Ancillary Market Data-Driven Simulation Tool
- Nov 2018 - Present **PhD Student**, *IEES Lab - DITEN - Unige*, Genova.
- Scientific research activity in the field of smart grids and smart buildings (see Education and Publications sections);
 - Consulting activity for public institutions and private companies in the field of power systems.
 - Teaching Assistant for Statistics Course of Bachelor's Degree in Management Engineering
- Jul- Oct 2018 **Predictive Modeler**, *IESolutions S.r.l.*, Genova.
Development, within a project aiming at developing an adaptive energy efficiency platform for the reduction of consumption in non-residential buildings, of the following:
- State-space predictive models for the thermodynamical behaviour of a HVAC-equipped test building;
 - A representation learning based room occupancy estimation model from thermal imagery;
 - Building HVAC setpoint optimization algorithm for energy-efficient prescriptive control.
- Jan-Jun 2018 **Data Scientist**, *Capgemini*, Insights & Data Business Unit, Milano.
- Development, together with a team of more experienced data scientists, of several Proof of Concepts:
 - a deep learning based image matching model for a fraud detection application of an insurance company;
 - a transfer learning based food recognition model for an operations cost reduction application of a global houseware retailer;
 - an item expected potential model and corresponding data visualization dashboard for a sport fashion wholesaler and retailer;
 - a deep learning model for an improved intent recognition application for the intelligent virtual assistant of a major telco operator.
 - Data preparation and exploration within a predictive maintenance project for a steel processing factory.

Education

- Nov 2018-present **PhD Degree in Electrical Engineering**, *University of Genova*, IEES Lab, Genova.
My research encompasses the application of machine learning, statistics and optimization methods for advanced predictive control of distribution grids with high penetration of renewable generation, energy storage systems and smart buildings

- Sep 2015–Dec 2017 **Master's Degree in Stochastics and Data Science**, *University of Torino*, Torino, GPA: 107/110.
 2017 Thesis title: Design and implementation of an innovative hybrid technique for an accurate photovoltaic generation forecasting
- Sep 2012–Jul 2015 **Bachelor's Degree in Statistica Matematica e Trattamento Informatico dei Dati (English: Mathematical Statistics and Data Management)**, *University of Genova*, Genova, GPA: 110/110 cum laude.
 Thesis title: Application of neural networks for forecasting and modeling algorithms of electric energy consumption
- 2007–2012 **High School Diploma**, *Liceo Scientifico P.N.I. "G.P. Vieusseux"* (high school with emphasis on mathematics), Imperia, GPA: 98/100.

Courses

- May 2020 **Neural Networks and Deep Learning**, *First course of the Deep Learning Specialization offered by deeplearning.ai through Coursera*.
 Online verified certificate:
<https://www.coursera.org/account/accomplishments/certificate/SXRU56UNJJ6E>
- Jun 2019 **Data-Driven Analytics and Optimization for Energy Systems**, *Hosted by Danish Technical University (DTU), Lyngby (Denmark)*.
- Jul 2018 **International Summer School on Deep Learning (DeepLearn2018)**, *IRDITA, Genova*.
- Jun 2018 **Introduction to Artificial Intelligence**, *course on Azure Cognitive Services, offered by Microsoft through edX*.
 Online verified certificate:
<https://courses.edx.org/certificates/204356e456db411a8fd327fdf37d32ee>
- May 2018 **R Programming**, *course on R language offered by Bloomberg School of Public Health (John Hopkins University) through Coursera*.
 Online verified certificate:
<https://www.coursera.org/account/accomplishments/certificate/A4UVFDJMMAJR>
- May 2018 **Apache Spark 2.0 with Scala - Hands On with Big Data**, *course on Apache Spark 2.0 and its Scala API offered by Sundog Education through Udemy*.
 Online verified certificate:
<https://www.udemy.com/certificate/UC-6RUJG82D/>
- May 2018 **The Ultimate Hands-On Hadoop - Tame your Big Data**, *course on the Hadoop ecosystem of technologies offered by Sundog Education through Udemy*.
 Online verified certificate:
<https://www.udemy.com/certificate/UC-00UZZHML/>
- Feb 2018 **Analyzing and Visualizing Data with Power BI**, *course on Power BI business intelligence tool of Microsoft, offered by Microsoft through edX*.
 Online verified certificate:
<https://courses.edx.org/certificates/12421f56424e4e1699d5638f349b9843>
- Jun 2016 **SAS Programming 1: Essentials**, *Intensive course of 2 days. Instructor: Alessandra Brunello, Torino*.

Awards

- Jul 2019 **3rd Prize at the Student Paper Contest of IEEE Region 8.**
- 2015-2016 Member of merit-based college "Collegio Einaudi", Torino
- 2013,2014 **Scholarship for academic achievements, MIUR, DM 198/2003.**
Assigned for passing the exams in the scheduled time
- 2012-2015 Member of merit-based college "Residenza Universitaria delle Peschiere", Genova

Publications

- Accepted **An Instantaneous Growing Stream Clustering Algorithm for Probabilistic Load Modeling/Profiling, PMAPS 2020 (16th International Conference on Probabilistic Methods Applied to Power Systems),** Authors: Massucco, S.; Mosaico G.; Saviozzi, M.; Silvestro, F; Fidigatti, A.; Ragaini, E..
- Accepted **Probabilistic Planning for Distribution Networks including Optimal DER Regulation and Storage Allocation, IEEE PES General Meeting 2020,** Authors: Massucco, S.; Mosaico G.; Pongiglione, P.; Saviozzi, M.; Silvestro, F.
- Apr 2020 **Soluzioni innovative per il risparmio energetico negli edifici del terziario, Gestione Energia N. 1/2020,** Authors: Bagnasco, A.; Vinci, A.; Silvestro F.; Mosaico, G;.
- Sep 2019 **Simplified State Space Building Energy Model and Transfer Learning Based Occupancy Estimation for HVAC Optimal Controls, RTSI 2019,** Authors: Mosaico G.; Saviozzi, M.; Silvestro F.; Bagnasco, A.; Vinci, A.
- Jul 2019 **A Hybrid Methodology for the Day-Ahead PV forecasting Exploiting a Clear Sky Model or Artificial Neural Networks, EUROCON 2019,** Authors: Mosaico G.; Saviozzi M.
- Apr 2019 **A Hybrid Technique for Day-Ahead PV Generation Forecasting Using Clear-Sky Models or Ensemble of Artificial Neural Networks According to a Decision Tree Approach., Energies,** Authors: Massucco, S.; Mosaico G.; Saviozzi, M.; Silvestro, F.

Computer Skills

- Basic C++, Java, SAS, Hadoop Ecosystem (in particular Spark), Scala, BCVTB, InfluxDB
- Intermediate SQL, Power BI, EnergyPlus, AMPL
- Advanced R, Python, MatLab

Languages

- Italian Mother tongue
- English Advanced *Aug 2011: FCE (University of Cambridge)*
- French Intermediate

Other activities

- 2011-2014 Volunteer at "Giornata del Banco Alimentare"

2018-present Savate gym member (TMB Genova)

2015-present Italian car driving license (B)