



DILETTA GOGLIA

Data Scientist

Interests

- Computational Social Science
- Data Mining
- Deep Learning and Neural Models
- Signal processing and analysis

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LATEST PUBLICATIONS

- D. Goglia, (2021) *Backpropagation for Dummies. All the math behind, simplest than ever*, in *Analytics Vidhya*
- D. Goglia, (2021) *Bias-Variance decomposition 101: a step-by-step computation.*, in *Analytics Vidhya*

ONGOING

I currently have two ongoing papers with Hummingbird research projects (a datapaper and a qualitative analysis) about international migration data understanding and nowcasting.

UNPUBLISHED

- D. Goglia (2020). *Amplifying bias, automating racism.*
- D. Goglia (2019). *Linked Open Data per il Cultural Heritage italiano.* (Bachelor Thesis).

PROFILE

I am 25, I currently live in Pisa and I am a Master of Science student in [Artificial Intelligence](#) @Computer Science department, University of Pisa. In parallel, I am a researcher for migration studies and nowcasting @[HumMingBird](#). I am also a tech writer for [Analytics Vidhya](#) publication on [Medium](#).

EDUCATION

- **Master of Science** in [Artificial Intelligence](#), master programme in Computer Science, @University of Pisa [AY. 2019/20 - 2021/22].
- **Bachelor's degree** in [Digital Humanities](#), @University of Pisa | Final grade: **110/110** [AY. 2015/16 - 2017/18].
- **Scientific high school** diploma, @Liceo scientifico G. Galilei, Civitavecchia, RM | Final grade: 95 /100.

RESEARCH ACTIVITY

- **Machine Learning & Data Mining** analysis @[HumMingBird](#) project, European Union's Horizon 2020. Nowcasting human migration by integrating (big) data from social networks and traditional sources.
 - Inferring and characterizing international migration patterns from Facebook connectedness.
 - Original results presented during 5th HMB Consortium Meeting, Salamanca (Spain) December 2021.

WORKING EXPERIENCE

- **Research assistant** for @[HumMingBird](#) project [Sep 2021 – Mar 2022].
- **Teaching assistant** of Javascript & Typescript @[Department of Computer Science, University of Pisa](#) [Oct 2020 – May 2021].
- **Tech support** @[Computer Science area of Medical School, Santa Chiara Hospital, Pisa](#) [Nov 2020 – Jul 2021].
- **Tech assistant** for “e-learning project”, @University of Pisa [Nov 2018 – Sep 2019].

GRANTS & AWARDS

- **Student on mission abroad** on Behalf of University of Pisa, at 5th HMB Consortium Meeting, Salamanca (Spain), Dec 2021
- **Winning candidate as research assistant** in ‘Machine Learning and Data Science to study and predict human migration by integrating data from social networks and traditional sources’, @Hummingbird EU project, Sep 2021.
- **Grant assignment for teaching** (2nd semester): winning candidate for job position as teaching assistant @Computer Science Department, University of Pisa, Jan 2021.
- **Grant assignment for teaching** (1st semester): winning candidate for job position as teaching assistant @Computer Science Department, University of Pisa, Oct 2020.
- **University performance ranking**: winner for merit of job position assignment as ICT assistant @Medical School, University of Pisa, Mar 2020
- **Study Grant** winner for participating at “Make in Italy Festival” event, Jun 2018.
- **University performance ranking**: winner for merit of job position assignment as ICT tech staff assistant @University of Pisa, Mar 2018.

LANGUAGES

Italian (Native)

English (Advanced | CEFR level B2 First)

French (Beginner | CEFR level A1)

LATEST EXAMS

- Robotics: **30/30**
- Data Mining: **30/30**
- Smart Applications: **30/30**
- Social&Ethical Issues in IT: **30/30**
- Intelligent Systems for Pattern Recognition: **30 cum laude**
- Machine Learning: **28/30**
- Semantic Web: **28/30**

RECENT UNIVERSITY PROJECTS (2020/2021)

- **Neural Network from scratch** | Implementation of a Neural Network from scratch in Python.
- **Among AI's videogame** | software development in team for MSc course of Smart Applications.
- **Data Mining Project** | Data Mining analysis on customers' shopping behaviour.
- **Gated Recurrent Neural Network for timeseries prediction** | Long-Short Term Memory (LSTM) to predict energy consumption from multivariate timeseries.
- **Hidden Markov Model for regime detection** | Python analysis of timeseries to cluster ranges of consumption, using Hidden Markov Models with Gaussian emissions.

HOBBIES

In my private life I'm a proud buddhist and a bodybuilding competitor athlete in NBF federation. I am also a huge reader! I love books about roboethic, religions, healthy habits, and personal growth.

In compliance with the Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize the recipient of this document to use and process my personal details for the purpose of recruiting and selecting staff and I confirm to be informed of my rights in accordance to art. 7 of the above mentioned decree.

Last update: Jan 2022

HARD SKILLS

I have **advanced expertise** in:

- **Machine Learning, Deep Learning, Neural Networks**
 - Bayesian learning
 - Graphical and generative models (HMM, MRF)
 - Deep learning techniques (CNN, Autoencoders, DBN, etc.)
 - Deep learning and Machine learning for computer vision and signal processing
 - Advanced neural networks (recurrent, recursive, ...) for learning and forecasting
 - Signal processing, image processing and time-series analysis
 - Data Mining tools and analysis (quality assessment, predictive analysis, ...)
- **Python programming**
 - ML and DL libraries & tools: Keras, Tensorflow, Jupyter, Git

During my studies I devoted time and efforts in learning **additional skills** which revealed to be very useful in my projects and during my work experience. They complete my profile and hone the way in which I work.

- **Web Development & Desing**
 - HTML, CSS, XML, XHTML, XSL-T, RelaxNG
 - JavaScript, TypeScript, PHP
 - Others: Flask, Google API, AJAX call, jQuery, JSON, MySQL for relational DBMS
 - Graphic design & Brand design with Adobe Photoshop, Illustrator, InDesign
 - Semantic Web and Linked Open Data (RDF, RSFS, OWL, SPARQL)
- **Communication**
 - Public speaking
 - CMS management (Wordpress)
 - Social Network Management
 - Professional Writing: Ebook, scientific papers
 - Agile software development & Kanban
 - Trello, Asana (to manage group working)
 - PowerPoint, Excel, Access DB and all other Microsoft products

SOFT SKILLS

During my studies I completed a lot of different projects either by myself or in a group (both small and large groups). This had taught me how to **efficiently collaborate** with colleagues, and how to **organize and coordinate work** during development. I learnt how to easily switch from **different environments and programming languages**. By working alone, I also improved my **autonomy** on **problem solving** and on looking for new solutions by myself. I constantly **keep myself updated** and I have great care for details, critical skills, precise organization and time management, enthusiastic and positive attitude.

CERTIFICATES

- Aug 2021 | **Write Professional Emails in English** | Coursera
- Jul 2021 | **CLab Soft Skills** | Contamination Lab
- Feb 2021 | **CLab PhD+** | Contamination Lab
- Jul 2018 | **Samsung Innovation Camp**
- May 2018 | **Digital Food Communication** | Foodiestrip
- Jan 2014 | **BLS (Basic Life Support)** | Croce Rossa Italiana
- Jan 2010 | **Attestation de mérite pour l'étude de la langue française** | AMOPA, Association des Membres de l'Ordre des Palmes Académiques

For further info visit my portfolio: www.dilettagoglia.netifly.app