# IVAN BONGIORNI, Data Scientist

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#### SKILLS

#### Tools:

- Python and TensorFlow.
- Data Science libraries: pandas, numpy, sklearn, statsmodels, albumentations, matplotlib, seaborn, bs4 for web scraping.
- Big data analytics: cloud computing on Google Cloud Platform, SQL, introductory Spark, PySpark, Hive.
- Git, version control.
- R

#### Machine Learning:

- Language models and recommender systems with RNNs and seq2seq architectures.
- Natural Language Processing: word embedding techniques, PoS and NER classifiers, sentiment analysis, constituency and dependency parsing, text classification.
- Computer vision with CNNs: image classification, denoising autoencoders, GANs.
- Unsupervised learning: Autoencoders, dimensionality reduction, clustering techniques.

## PROFESSIONAL EXPERIENCE

#### GfK - Data Scientist

September 2018 - Present, Milan, Italy

- Sentiment Analysis and NLP techniques for competition-driven price regulation.
- I increased the accuracy of internal Anomaly detection systems using RNNs.
- I traveled and worked abroad with an international team of Data Scientists for GfK Global (Nuremberg and London) at the development of GfK Newron, a data analytics online platform for automated market insights.
- I was nominated Italian technical reference of GfK Newron for customers.
- Customer segmentation with unsupervised Machine Learning.
- Time series forecasts with RNNs and ARIMA regressions.

# PERSONAL PROJECTS

- Seq2seq GAN for imputation of missing data in time series; trained on Wikipedia Web Traffic dataset (Kaggle). https://github.com/IvanBongiorni/GAN-RNN\_Timeseries-imputation
- RNNs for time series forecasting.
  - https://github.com/IvanBongiorni/RNN\_TimeSeries-Forecast
- TensorFlow 2 Notebooks on Deep Learning tutorials on multiple Autoencoder, CNNs, RNNs. https://github.com/IvanBongiorni/TensorFlow2.0\_Notebooks
- Neural Text generator trained on Dante's Divine Comedy. https://github.com/IvanBongiorni/TensorFlow2-RNN\_text\_generator-Dante\_DivineComedy

#### Work in progress:

• Chatbot for Customer Support on Twitter; Seq2seq RNN with Attention. https://github.com/IvanBongiorni/Chatbot\_Seq2seq-Attention-TensorFlow2

## RESEARCH

# University of Milan — PhD in Political Economy

January 2014 - May 2018, Milan, Italy

I was hired by the Department of Social Sciences to conduct statistical research and econometric estimations.

- Statistical research: R programming, time series analysis, event-history models (parametric and semiparametric), multilevel regressions.
- Mathematical theory of games, economic modeling.

# University of Michigan - Visiting PhD Scholar

January 2016 - June 2016, Ann Arbor, MI, United States

After being selected for this position, I pushed my statistical research forward working with world-renowned scholars, improving my quantitative and analytical skills.

# University of Michigan

June 2015 - August 2015, Ann Arbor, MI, United States

I attended courses on: R programming, Bayesian statistics, time series analysis and calculus.

# University of Mannheim

June 2014, Mannheim, Germany

I attended a course on Bayesian statistics.

I won the SGEU (Standing Group of the European Union) tuition grant to access the program.

# **EDUCATION**

# University of Pavia — Political Science

summa cum laude

April 2013, Pavia, Italy

- Statistical analysis.
- Economics.
- Philosophy of science.

Erasmus Student: Högskolan Dalarna, Borlänge, Sweden (August 2009-January 2010).

#### Istituto G. Marconi — Computer Science degree

June 2007, Piacenza, Italy

- Computer Science. Languages: Visual Basic, SQL, C#.
- Statistics, probability theory and combinatorics.
- Calculus.
- Stage: I implemented the management software of fine tickets and car accidents for the local Police department.

## **ACHIEVEMENTS**

- I'm in the world top 0.5% on Data Science StackExchange with tags 'Machine Learning' and 'Deep Learning'.
- During my PhD, I was accepted to hold Conferences at the University of Oslo and the University of Hamburg where I presented the results of my statistical analyses.

## **STRENGHTS**

- Oral and written communication.
- Committed to lifelong learning.
- Used to work in Agile teams.
- Linguistic skills:
  - native Italian;
  - very fluent English;
  - basic French.
- Linux user.