Alessandro Mozzato

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Data scientist with a strong mathematical background and extensive experience in numerical modelling.

Positions

Jun 2017– **Data Scientist**, *Booking.com*, Amsterdam.
Analysis of large data-sets to identify insights to inform business decisions.

- Querying petabyte-scale data using Hadoop and related particularly Spark to answer business questions
- Working with decision-makers to suggest practical actions, and ways to quantitatively test their success
- Extensive experience with A/B testing at scale, analysing experimentation practices, testing and developing appropriate metrics
- Build a web application for analysis and visualisation of a large textual dataset

Oct 2016-May 2017 **Data Scientist**, *Enel*, Rome.
Research and development of machine learning algorithms for anomaly detection and predictive maintenance.

- Worked on machine learning models on time series
- Developed an anomaly detection model for power plant monitoring
- Developed and deployed a webapp for model monitoring and live validation

Jan-Sept 2016 **Data Scientist**, *IZSV - Consultant*, Padova.
Analysis of geospatial data and development of predictions for virus spreading.

- Geospatial analysis of metereological and environmental data
- Developed a machine learning model for virus diffusion prediction

Education

2013-2017 **PhD in Climate Modelling**, *University of Southampton, National Oceanography Centre.*

Project *Can huge submarine landslides affect thermohaline ocean circulation and climate?* Developing climate models to study strong perturbation of the Arctic Ocean circulation.

- Code written mainly in Python, interfaced with model written in Fortran.
- Close collaboration with climatologists, field geologists and phisical oceanographers.
- Interdisciplinary work of interest to audiences ranging from mathematics to geology.

2011–2013 **M.Sc. Applied Mathematics**, *University of Padova*, 110/110 *cum laude*.

- Stochastic Analysis
- Stochastic Methods for Finance
- Numerical Methods for Data Analysis
- Partial Differential Equations
- Dynamical Systems

2012–2013 **M.Sc. Applied Mathematics**, *University of Lille 1*, Erasmus Programme.

Master thesis *A mesh adaptive algorithm for numerical incompressible Navier-Stokes equations*

2008–2011 **B.A. Mathematics**, *University of Padova*, *106/110*.

Final Project *The Exponential Radon Transform*

Skills

Data Science — I have experience analysing large dataset using big data tools such as Hive Spark and Oozie and well as delivering key results and insights to drive business decisions. Experience delivering data visualizations and dashboards using Matplotlib, Bokeh, d3.js, Grafana and Tableau.

Machine Learning — I developed and deployed machine learning algorithms for anomaly detection as well as an application for text analysis on a large corpus of documents. I worked on recent deep learning topics such as word embeddings, Word2Vec and Generative Adversarial Networks.

Web Dev — I am familiar with web development concepts covering back-end in python using Flask and standard front end with HTML/CSS and javascript from my work at booking.com and personal projects.

Relevant Courses

2018 **Deep Learning**, *deeplearning.ai on Coursera*.
Five courses specialization by Andrew Ng on Deep learning using Python, Tensorflow and Keras.

2016 **Machine Learning**, *Stanford University on Coursera*.

2015 **Data Science at scale**, *University of Washington on Coursera*, Three course specialisation using: MapReduce on Pig and Python, Machine Learning on R, SQL. Final project *Predict building abandonment*, using Python and Tableau on a real world dataset.

2015 **Introduction to Big Data with Apache Spark & Scalable Machine Learning**, *Berkeley University on edX*.

Experiences

July 2014 **On-board Scientist**, *Oceanic expedition*, RV Pelagia.
Collection, visualisation and processing of bathymetric and seismic data.

April-June 2013 **Internship**, *Inria*, Lille.
Development and validation of mesh adaptive techniques for fluid dynamics problems.

Spoken Languages

Italian — **Native**

English — **Fluent (speaking, reading, writing)** — *TOEFL (iBT) score: 108/120*

French — **Advanced (speaking, reading); Intermediate (writing)**

Conference Presentations

2016 **European Geophysical Society**, *Vienna*, Were the Trænadjupet and Nyk Slides multi-staged?.

2015 **Challenger Society for Ocean Modelling**, *Cambridge*, Modelling the effect of submarine landslides on ocean circulation.

2015 **European Geophysical Society**, *Vienna*, Insights from high-resolution multibeam data on the Trænadjupet landslide on the Norwegian margin.

2014 **British Sedimentological Research Group**, *Nottingham*, Insights from high-resolution multi-beam data on the Trænadjupet landslide on the Norwegian margin.