

Sebastian Bertoli

Junior Data Scientist

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Profile

Junior data scientist at Fraunhofer Italia Research working on advanced analytics and machine learning for Industry 4.0. Amateur cyclist, sports data-geek and lifelong learner.

Experience

Junior Data Scientist / Fraunhofer Italia Research

March 2018 – Current | Bolzano (Italy)

- Co-developed prototype for a flexible collaborative robotic system.
- Co-authored book chapter describing said prototype. [1]
- Assessed feasibility of machine learning driven quality control for major Italian manufacturing company.

Data Science Intern / Human Mobility Lab, Kessler Foundation

3 months | July 2017 – September 2017 | Trento (Italy)

- Assisting big data research investigating the mobility patterns of U.S. cities.
- Implementation of fast parallel stop-location extraction and clustering algorithms for big data.
- Data visualization of human mobility patterns and stop locations with ggplot and Tableau.

Teaching Assistant in Python programming / Tilburg University

6 months | February 2016 - July 2016 | Tilburg (Netherlands)

- Developed IPython notebooks teaching students the fundamentals of data visualisation in Python.
- Supervised lab sessions and improved teaching effectiveness by reducing head teacher workload.

Creative Retoucher & IT / Recom Digital Image Production

3 years | September 2011 - September 2014 | London (United Kingdom)

- Part of an award-winning team of digital artists specialised in creating computer generated imagery for the automobile industry.
 - Wrote technical manuals facilitating company-wide knowledge sharing.
 - Worked on the “Volkswagen Unbelievable Value” campaign, finalist of the “One Eyeland Photography Awards”.
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Education

MSc Artificial Intelligence / University of Amsterdam

1 year | September 2016 – June 2017 (18/120 ECTS) | Amsterdam (Netherlands)

- Expanded machine learning knowledge through theoretical study and writing implementations in Python.

- Built information retrieval ranking models (TF-IDF, BM25, etc.) and undertook course in data mining.
- Data mined health data and the infamous Expedia dataset.

MSc Data Science: Business & Governance / Tilburg University
2 years | September 2015 – June 2017 | Tilburg (Netherlands)

- MSc thesis: *Automatic classification of vessels using historic AIS navigation data*.
- Took additional courses in data mining, data protection, law and programming. Wrote privacy assessment of Google Photos.
- Consistently achieved strong grades (GPA > 8.0).

rMA Media Studies / University of Amsterdam

1 year | September 2014 – June 2015 (48/60 Ects) | Amsterdam (Netherlands)

- Co-developed the concept for a university-wide interdisciplinary knowledge-sharing and collaboration platform called the “UvA Research Hub”.
- Co-authored 60-page study on Amsterdam’s Open Data culture revealing a vibrant but narrow-focused urban Open Data culture.

Projects

Extracting destinations from GPS data / Internship

<https://sebastianbertoli.github.io/demos/human-mobility/>

This project was carried out during my summer 2017 internship at the Bruno Kessler foundation. The goal was to implement a fast algorithm that could extract destinations (places where people stay) from GPS data.

Classifying vessels using historical AIS data / Master Thesis

<https://github.com/sebastianbertoli/UvT-Thesis>

Built a machine learning model using semantic knowledge in order to automatically classify ships based on their historical navigation data.

Publications

Entwicklung eines flexiblen, inkrementell lernenden

Programmiersystems for kollaborative Roboterapplikationen.

Giusti, A., Steiner, D. and Bertoli, S. (2018). In: D. Matt, ed., KMU 4.0 - Digitale Transformation in kleinen und mittelständischen Unternehmen. [online] Berlin: GITO, pp.233-248. Available at: <https://bit.ly/2Rb5cQF> [Accessed 19 Oct. 2018].

Tools

Languages: Python, R, SQL, Latex.

Libraries: Scikit-learn, Pandas, Matplotlib, ggplot2, tidyverse.

Software: Tableau, RapidMiner, Git, Illustrator, Photoshop, MS Office, Anaconda, Visual Studio Code, PyCharm.

Languages

German: native
Italian: native

English: full working proficiency (C2)
Dutch: beginner (A2)