Leonardo Balzoni

Software Engineer

https://leobalzoni.github.io/BalzoniPortfolio/ ***www***
https://www.linkedin.com/in/leobalzoni ***in***
https://github.com/LeoBalzoni ***git***
l.balzoni@gmail.com ✉
(+39) 338-1226554 ☏

People and solution-oriented Software Engineer, with a strong foundation in algorithm design, machine learning, neural networks and data modeling.

EXPERIENCE

Jpanik s.r.l., Rome (IT) - *Junior Software Engineer*

October 2017 - August 2018

- Responsible for the daily development of a full stack application which managed the logistics of hospital structures: shifts optimization, ward management, billing, etc. (Java, AngularJS)
- Conceptualized, planned, and developed the requisites of the application while managing the clients needs and updates.

EDUCATION

Università La Sapienza, Rome (IT) - *Master's in Computer Science Engineering*

October 2018 - PRESENT (Est. graduation date: January 2021)

- Current grades average: 29.6/30. Estimated graduation score: 110/110 Magna Cum Laude
- Relevant coursework: Algorithm Design, Machine Learning, Neural Networks, Software Design and Development, Human Computer Interaction, Data Management, Mobile development.
- Currently working on my master's thesis: Development of a fake news detection tool using a deep convolutional recurrent neural network and linguistic automata.

Università Roma Tre, Rome (IT) - *Bachelor's in Software Engineering*

November 2014 - February 2018

- Graduated with 107/110.
- Thesis: "Development of an application for the logistic management of a hospital structure"

SKILLS

Fluent in Java, JavaScript, Python, HTML, CSS and AngularJS. Proficient in SQL, Lua and OpenGL. Great problem solving skills, well aware of Agile methodologies, thorough knowledge of data structures, version repositories, web APIs and web services. Attention to details and strong communication and collaboration skills.

PROJECTS

NYCVA - Created a visual analytics toolkit to gather insights about housing in New York City. Starting from a dataset extracted from the AirBnB website I created multiple visualizations that provided interaction between them and were empowered by data mining methods such as PCA or a Random Forest Regressor. The tool was developed in Javascript with the aid of D3.js. *Tool* / *Code*

Sound Source Localization with Quaternion NN - Modified an existing NN to solve the tasks of Sound Event Detection and Direction of Arrival of overlapping sounds in reverberant environments. Utilized quaternion network layers and a short time quaternion fourier transform to optimally encode the features, greatly improving training time. *Code*

Twitter Spam Detection - Used multiple machine learning algorithms (SVM, k-NN, Random Forests) to fight spam on social media. Results are tested on multiple datasets to validate their credibility. *Code*

Venice's boats classification - 24 class image classification of boats crossing the "Gran Canale di Venezia". After extensive training the neural network built with TensorFlow reached 94% accuracy with extremely high performance metrics.