# Davide Buffelli

## Personal Data


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| Place and Date of Birth: | Italy \| 30 December 1994 | website: | https://davidebuffelli.github.io |
| email: | davide.buffelli@unipd.it | LinkedIn: | linkedin.com/in/davide-buffelli |


## About Me

My university studies focused on Algorithmics, and Machine Learning. After a six months internship experience developing Deep Learning algorithms for the analysis of medical slides, and my graduation, I decided to follow my passion for research with a six months period as a Research Fellow, and I am now a first year Ph.D. student in Information Engineering at the University of Padova. I have a broad interest in Deep Learning, with a current focus on techniques for structured data (geometric Deep Learning), complex temporal data (multimodal time series, and evolving graphs), and meta-learning.

## Work Experience

**Apr. 2019-Sept. 2019** — Research Fellow at University of Padova, Padova

Project: "Machine Learning for Temporal Data"
Supervisor: Professor Fabio Vandin.
The research project focused on the development of novel Deep Learning frameworks for multimodal times series.

**Jan. 2019-Feb. 2019** — Data Scientist, Machine Learning Engineer at Machine Learning Reply, Milan

During my time at Machine Learning Reply I had the chance to work for important clients on machine learning related projects. In particular I contributed to:

- the development of a chatbot that aids financial traders in their operations.
- the development of an automatic system for the analysis of documents and invoices.

The main technologies involved were: Python, Rasa, Google Cloud Vision, Java.

**Jul. 2018-Dec. 2018** — Data Science Intern at Philips Digital and Computational Pathology, Belfast

I worked in the team responsible for the development of algorithms that aid pathologists in the analysis of medical slides (inside the TissueMark application). This implied the creation, training and validation of Deep Learning models and the engineering, processing and analysis of data.
In more detail, my tasks included:

- The creation of an automatic system for the tuning of hyperparameters for Deep Learning models.
- The development of the algorithm for the identification of the appropriate tumour regions for macrodissection for lung tissue slides (which included the analysis and engineering of data and the training and validation of Deep Learning models).
- The development of technical tasks to improve the overall Deep Learning infrastructure.

The main technologies involved were: Python, Keras, TensorFlow.

## Education

**Oct. 2019 - *Present*** — Ph.D Student in Information Engineering,
**Università degli studi di Padova**, Padova.
Supervisor: Prof. Fabio Vandin.

**Feb. 2019** — Master's Degree in Computer Science Engineering,
with final grade 110/110 with honors, **Università degli studi di Padova**, Padova.
Thesis: "A Deep Learning Model for Personalised Human Activity Recognition."
Advisor: Prof. Fabio Vandin.

**July 2016** — Bachelor's Degree in Information Technology Engineering,
with final grade 107/110, **Università degli studi di Padova**, Padova.
Thesis: "Algorithms for the determination of node centralities in a graph."
Advisor: Prof. Andrea Alberto Pietracaprina.

**July 2013** — Engineering Technician in Computer Science (Secondary School Diploma),
**Istituto Tecnico Informatico "Alle Stimate"**, Verona | Final Grade: 94/100.

## Service

- **Reviewer** for: *RECOMB* 2020, *ISMB* 2020

## Computer Skills

**Proficient**: Python, Java
**Familiar:** C, Apache Spark, SQL, PostgreSQL, Objective-c, Swift.

I worked extensively, both in an academic and in a professional environment, with the main Machine Learning and Deep Learning libraries such as TensorFlow, PyTorch, Keras, Pandas, scikit-learn.

## Languages

Italian: Mother tongue.
English: Advanced C1.