

# Luca Demo

English version - Apr 2017

**Current position** Graduated Computer Science MSc – Artificial Intelligence specialization

**Current location** Padova – Italy

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*I recently graduated in Computer Science MSc with **Artificial Intelligence** specialization. My main interest lies in **programming** (Java, Python, C...) and **Machine Learning** as the key to the understanding of the hidden patterns in the large amount of data we face every day.*

*My academic path allowed me to touch fields like data analysis, information retrieval, computer vision, bioinformatics and neuroimaging.*

*I'm looking forward to **work on these topics to learn more about them.***

## EDUCATION

**Oct 2013 – Dec 2016** **MSc Computer Science (Artificial Intelligence)**

University of Padua (Italy)

Thesis: “*Machine learning and Neuroimaging: searching for biomarkers in neurological brain diseases*”. I used **machine learning algorithms**, mainly Support Vector Machine (single and multiple kernel) and Random Forest to classify between healthy and pathological patients using 3D neuroimages (structural MRI). Extraction of information from the models to highlight possible structural brain modifications (through heatmaps). **Python** and **ML libraries** have been used. The work is a collaboration with the University of Padua Psychology Department.

Now working with Padua University researchers to **publish an article** based on the thesis results.

Relevant courses: Artificial Intelligence, Machine Learning, Constrained system, Data Mining, Information Retrieval, Bioinformatics, 3D data processing.

**Oct 2008 – Mar 2013** **BSc Computer Engineering**

University of Padua (Italy)

Thesis: “*PariCluster: network simulation tool for clusters*”.

I wrote a tool to help in the simulation of a distributed network over a SLURM managed cluster. The programming language used is **Python**. The work was part of the University Department of Information Engineering “PariPari” project.

**2002 - 2007**

**High School diploma “Computer Technician”**

I.T.I.S. “F. Severi” technical institute in Padua

## SKILLS

### Computer science

**Programming Languages:** Imperative, object-oriented and functional paradigms, able to easily learn new languages.

Academic experience: Python, Java, C

Minor experience: R, C++, PHP, ML

**Databases:** SQL and notions of NoSQL (MongoDB)

**Libraries and frameworks:** scipy, scikit-learn, numpy

**IDE and development Tools:** Eclipse, SVN, GIT

**Other computer skills** **Machine learning and artificial intelligence** algorithms (academic experience): regression, trees, random forest, Support Vector Machines, kernel methods, neural nets.

**Image processing** and filtering main algorithms (academic experience), depth sensors and computer vision.

### **Computer Networks**

**Personal computer assembly, configuring and fixing** experience thanks to my natural passion for computers.

**Operating Systems:** good knowledge of Microsoft Windows  
intermediate knowledge of Debian-like linux distributions

### Languages

**Italian** Native

**English** Advanced (C1)

B2 attested by "University of Padua Linguistic Centre" 2015

B1 certified by "Cambridge University ESOL examinations" 2007

**Chinese** Elementary (A2)

HSK2 exam (marks 198/200) - "Confucius Institute" Dec 2016

### Personal

Experience in **team development**, thanks to many academic projects where I worked together with fellow students.

Good **technical reporting** skill

I like to **work on problems** to find solutions and possible improvements.

## OTHER ACTIVITIES AND INTERESTS

In 2015 I started studying Chinese language by attending an introductory course and then by myself, getting an A2 certification. I'd like to improve it.

Since 2011 I play musical instruments and help in direction of the local parish youth choir in my town.

From 2006 to 2013 I wrote the local parish weekly bulletin.