

Marco De Nadai

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| CONTACT INFORMATION | E-mail: me@marcodena.it Website: http://www.marcodena.it LinkedIn: http://nl.linkedin.com/in/marcodenadai GitHub: https://github.com/denadai2 |
| EDUCATION | <p>Università degli Studi di Trento, Italy September 2012 – March 2015 Computer science - Information processing and data management <i>Master's Student, 110L/110, summa cum laude</i></p> <p>Vrije Universiteit Amsterdam, The Netherlands August 2013 – August 2014 Computer science - Artificial Intelligence <i>Exchange Master's Student</i></p> <p>Università degli Studi di Udine, Italy October 2007 – March 2012 Computer science <i>Undergraduate Student, 100/110</i></p> |
| PROFESSIONAL EXPERIENCE | <p>Data scientist April 2015 - Present <i>Fondazione Bruno Kessler, Italy</i> Research assistant on city science from Call Detail Records (CDRs). The project has the aim of describe and classify cities through ubiquitous technologies such as mobile phones and credit cards. <i>Languages used: Python</i></p> <p>Data Scientist Intern September 2014 - March 2015 <i>Telecom Italia, Italy</i> Responsible of a project named "The life of a city: social-economical trends through mobile phone data traffic analysis" with the aim of describing cities behavior from CDR data. This project finds activity hotspots and associates socio-economic indexes such as GDP, wages, employment and epidemics, to the population's (mobile) activeness. <i>Languages used: Python</i></p> <p>Machine Learning Intern April 2014 - August 2014 <i>University of Amsterdam, Netherlands</i> Intern on a project about detecting anomalies in the gas consumption of around 20 buildings of Amsterdam. The project involved the construction of an Artificial Neural Network able to predict energy consumption. <i>Languages used: Python, R</i></p> <p>iOS developer February 2013 - December 2013 <i>Ulook, Italy</i> iOS and API developer for Ulook, a fashion mobile application. I developed the app, proposed and applied a new design for a better user experience and optimized it for iOS 7. <i>Languages used: Objective-C</i></p> <p>Lead web developer and Software Engineer May 2008 – February 2012 <i>MCZ GROUP S.p.A., Italy</i> PHP Zend Framework developer with knowledge in IBM AS/400 communication and interaction. Front-end developer experienced in A/B testing and marketing strategies. Developer of geo-marketing solutions aimed to map turnovers of MCZ GROUP's clients. Technologies used: MySQL, jQuery, HTML5, CSS3, git, Nginx, Apache, Linux. <i>Languages used: PHP, Java, Javascript</i></p> |
| AWARDS | <p>Finalist Data Journalism Awards 2014 May 2014 <i>Global Editors Network</i> The Data Journalism Awards rewarded "The Westgate attack" data visualisation project as an outstanding work in the field of data journalism in any media worldwide.</p> |

Best mobile application*Smau 2014***March 2014**

Ulook was recognized as the best application in the "Community and Social" category by the "Smau Mob App Awards".

Special creativity price*IED, allo StartupWeekEnd 2012 di Torino***June 2012**

Special creativity award from IED (<http://www.ied.com>) at StartupWeekEnd 2012. The awarded project was "Linked Green", a prototype that enables the user to scan a product's barcode and see all the information about its package and its eco sustainability.

PUBLICATIONS

A Tale of Cities: A Multi-source Dataset of Urban Life*Nature scientific data - under publication process***2015****Investigating the relationships between spatial structures and urban characteristics***NetMob - MIT Media Lab - U.S.A.***2015****Short-term anomaly detection in gas consumption through ARIMA and Artificial Neural Network forecast***EESMS - Italy***2015**PERSONAL
PROJECTS**Westgate Attack***Master project***2013**

Visualization about the Westgate shopping mall attack case that took place in Nairobi, Kenya, during 21-24 September 2013. This project analyzed around 700'000 Tweets and tried to describe the events through the users' behaviour. The beta can be found: <http://lstout.github.io/westgate/html/>. *Tools used:* Python, SQLAlchemy, PIL, D3js.

A new massive data analytics approach to football*Master project***2013**

Small framework of tools which enables the coaches to base their new strategies not only on their intuition and judgment, but also on comprehensive (and maybe not human-eye visible) statistics. The framework is composed by a training clustering (with K-means), a trajectories clustering (TRACCLUS), a speed performance analysis and a passages pattern visualization. *Tools used:* Python.

Formal verification OAuth 2.0 protocol*Bachelor project***2010**

Formal verification of the protocol OAuth 2.0 (draft 22) using the automatic cryptographic protocol verifier Proverif (<http://prosecco.gforge.inria.fr/personal/bblanche/proverif/>).

Komixjam.it*Developer - Founder***2006 – 2010**

Brand creation and establishment of a community that counts 30'000 unique visits a day. *Technologies used:* mySQL, Sphinx, CSS, jQuery, Nginx, Linux.

SKILLS
AND
BACKGROUND*Advanced knowledge:* Java, Objective-C, Python, PHP, Javascript, HTML5, CSS3, SQL*Medium knowledge:* C, C++

LANGUAGES

- *English:* good (B2 level)
- *Italian:* native

Computer science - Artificial Intelligence

- Evolutionary Computing (*Evolutionary algorithms, strategies...*)
- Coding and Cryptography
- Knowledge Engineering
- Distributed System
- Machine Learning (*Supervised/Unsupervised Learning, Neural networks...*)
- Information visualization (*D3js, theory...*)

Computer Science - Information retrieval and data management

- Formal methods
- Economics and Management - Innovation and Entrepreneurship
- Data and information integration (*Information retrieval...*)
- Technical Writing (*how to write papers and scientific documents...*)
- Laboratory of Business Process Management (*Signavio, Business management...*)
- Advanced Business Intelligence Techniques (*Pagerank, Hadoop...*)
- Massive Data Analytics (*data mining, data structures, practical data mining projects...*)
- Security Testing (*white/black box testing, web security, penetration tests...*)

Computer Science

- Mathematical Analysis
- Computer Architecture
- Programming
- Physics
- Discrete Mathematics
- Algorithms
- Professional ethics
- Statistics
- Mathematical logic I
- Mathematical logic II
- Objective Oriented Programming
- Scientific Calculus
- Computability I
- Computability II
- Operative Systems
- Databases
- Software Engineering
- Formal Methods I
- Networks
- Network security & Lab.
- Web Design