MATTEO FRANCIA

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DESIRED OCCUPATION

Placement in a position that allows for research in machine learning with a particular focus on data mining.

EDUCATION

Master's degree **October, 2014 → March, 2017**
Computer Science and Engineering *University of Bologna, Italy*

· Studies in the field of software engineering, programming paradigms and languages.
· 110L/110 - *Magna cum Laude*

Erasmus+ **September, 2015 → July, 2016**
Naturwissenschaftliche Informatik *Universität Bielefeld, Bielefeld, Germany*

· Studies in the field of artificial intelligence, machine learning, neural networks and speech recognition.

Bachelor's degree **September, 2011 → October, 2014**
Electronics, informatics and telecommunications engineering *University of Bologna, Italy*

· Studies in the field of networking, signal processing, software engineering and programming languages.
· 110L/110 - *Magna cum Laude*

High-school diploma **2006 → 2011**
Informatica abacus *I.T.T.S. "Blaise Pascal", Cesena, Italy*

· 100L/100 - *Magna cum Laude*

PUBLICATIONS

Submission to SASO 2017
11th IEEE International Conference on Self-Adaptive and Self-Organizing Systems

· Title: "Towards a Foundational API for Resilient Distributed Systems Design".
· Authors: Matteo Francia, Danilo Pianini, Jacob Beal, Mirko Viroli.

Master's degree thesis **March 16, 2017**
A Foundational Library for Aggregate Programming *Relator: Prof. Mirko Viroli*

· Co-relators: Jacob Beal (University of Iowa), Danilo Pianini (University of Bologna)
· *Deployment of the* `Protelis-Lang` *library and* `Protelis-Test` *framework for the aggregate programming.* External site: `http://amslaurea.unibo.it/13090/`

Bachelor's degree thesis **October 9, 2014**
Apprendimento Hebbiano in Robotica: Teoria e Applicazione *Relator: Prof. Andrea Roli*

· *After the study of Hebbian learning theory, a sequence of steps to build a robot capable to learn is presented exploiting DAC and Value System architectures.* External site: `http://amslaurea.unibo.it/7550/`

AWARDS

Best graduate award **May 20, 2017**
Best graduate - School of Engineering and Architecture *27th Rotary Award "Guido Paolucci"*

EXPERIENCE

Research fellowship **May, 2017 → April, 2018**
Modeling social behaviors from trajectory data *DISI - University Of Bologna, Italy*

- User and group profiling based on location data, with a particular focus on big data architectures
- UniBO supervisor: Prof. Matteo Golfarelli

Visiting researcher **October, 2016 → December, 2016**
Advancements in the aggregate programming field *University Of Iowa, Iowa City, IA, USA*

- Development of the fully-resilient `Protelis-Lang` library for aggregate computing
- UIowa supervisor: Dr. Jacob Beal, UniBO supervisor: Prof. Mirko Viroli

Internship **October 1, 2013 → March 15, 2014**
Raspberry Pi and Linux Kernel *APIce lab, University of Bologna, Cesena, Italy*

- *Analysis of Raspberry Pi's I/O kernel modules to manage GPIOs and external devices on Linux. Project and implementation of Magic Boxes demo.*
- Supervisor: Prof. Alessandro Ricci
- External site: `https://apice.unibo.it/xwiki/bin/view/Tirocini/raspi14Francia`

EffeSicurezza di Francia Luigi **June → August: 2008, 2007, 2006**
Apprentice *Cesena, Italy*

- Design and installation of security, CCTV and home automation systems

OTHER

Open source contributions

- Protelis: development of the fully-resilient `Protelis-Lang` library for aggregate computing, bug fixes and further enhancements. External site: `https://github.com/Protelis/Protelis`
- Alchemist: enhancements of the Alchemist simulator and bug fixes.
  External site: `https://github.com/AlchemistSimulator/Alchemist`
- Contributor to ArchWiki and Wikipedia

Exhibition **March 14 and 15, 2014**
Magic boxes *MAMbo - Museum Of Modern Art Bologna, Bologna, Italy*

- *We built "smart" boxes—with Raspberry Pis and Android tablets—capable of self-organization and coordination. Users can interact with them, creating different compositions and effects.*
- Supervisor: Prof. Alessandro Ricci
- External site: `http://www-db.disi.unibo.it/MAMbo/mambo/i6/en/`

TECHNICAL STRENGTHS

Hardware configuration	Server and Desktop systems assembling
Computer Programming	Object Oriented design, distributed systems, concurrent programming, mobile programming (Android)
Software configuration	Windows and Linux installation and configuration
Programming Languages	Java, Scala, C#, Haskell, Prolog, Java Script, C, Python
Protocols & APIs	TCP, UDP, HTTP, DNS, JSON, SOAP, REST
Databases	SQL, MySQL, PostGres, PostGis
Development techniques	Git; Build systems: Gradle, Maven; CI: drone.io and TravisCI
Markup languages	XML, HTML, Markdown
Tools	Vim

LANGUAGE

	Reading	**Listening**	**Writing**	**Speaking**
Italian	Mother tongue			
English	C1	C1	B2	B2
German	B1	B1	A2	A2

Skills acquired during Erasmus+ in Bielefeld (DE), and research at University Of Iowa, IA (USA)

IELTS, British Council, European level: C1 **July, 2015**

ADDITIONAL INFORMATION

About me: During both Bachelor's and Master's degrees, I have learned to manage small to medium-sized group projects. My permanences in Bielefeld and Iowa considerably improved my adaptation and independence skills, giving me the opportunities to integrate with multicultural communities.

Field of interests: programming languages and paradigms, machine learning, data analytics, neural networks, open source.

Signature, May 21, 2017