

Federico Scozzafava

PROFILE

Second year student of the **Master course in Computer Science** at the University of Rome “La Sapienza”.

Technical skills

- Experienced in software development using **Java, C#, C, OpenCL, Shell scripting, Python** programming languages.
- Familiar with Javascript, PHP, web languages in general and Assembler programming languages.
- Experienced in Android and Windows Universal applications development.
- Experienced in developing collaborative software using advanced **Object-Oriented** strategies and **Design-Patterns**.
- Experienced in developing hi-performance software on **parallel architectures**.
- Experienced in UNIX systems.
- Author of several **applications** currently published on application stores such as **Android Google Play Store** and **Windows Universal** Platform Store.

Research activities

- Actively interested in the **Artificial Intelligence** Natural Language Processing research field.
- Worked on improving a **Word Sense disambiguation** system and an **image recognition system** based on Computer Vision and NLP semantic techniques.

Other projects

- Development of **hardware and software** for embedded systems such as Arduino and Linux development boards in the context of **computer music interaction systems**, using popular open source solutions for audio/video processing (such as Processing and Csound).

EDUCATION

University of Rome “La Sapienza”

*Bachelor degree in **Computer Science***

2013-2015

Graduated **110/110 magna cum laude**

Achievement of the **honours programme** (additional training activities to those given by the regular courses) issued by the Faculty Dean.

Thesis argument: **Artificial Intelligence**

Supervisor: Prof. Roberto Navigli

Title: **Concept's semantic annotation through sense disambiguation and computer vision**

University of Rome "La Sapienza"

*Second year Master Degree in **Computer Science***

2016-now

Attending the **honours programme** (additional training activities to those given by the regular courses) issued by the Faculty Dean.

LANGUAGES

Mother tongue: **Italian**

Fluent in English due to two English certificates awarded by the University of Cambridge and experiences of **study abroad** (Cambridge Anglia Ruskin University, Magister Academy of Malta).

ACTIVITIES

Research activities

Collaborations with the **Linguistic Computing Laboratory (LCL)** under the supervision of **Professor Roberto Navigli** in the **Natural Language Processing** field.

- Developed a prototype of game with a purpose directed to the acquisition and **validation of large-scale lexical-semantic** (eg. The concepts of a semantic network, **BabelNet** <http://babelnet.org>) **and visual** (eg. Images) annotations, and the conception of automatic algorithms for the association of images to concepts.
- Worked on a large, state of the art, multilingual disambiguation system, **Babelfy** (<http://babelfy.org>), improving and designing automatic algorithms in the context of Word Sense Disambiguation NLP problem in order to address word ambiguity using the well-known multilingual knowledge base **BabelNet** (<http://babelnet.org>).
- Developed a **CBIR system** (content based image retrieval) based on the **combination of NLP and Computer Vision techniques**. The system takes an image in input and produces a set of visually similar images together with the most appropriate and descriptive concepts for the image. The system uses **BabelNet** (<http://babelnet.org>) as knowledge base and sense inventory.
- Developed a multilingual **Terminology Extraction** system, **BabelTex** (<http://babeltex.org>) for the automatic extraction of relevant terms from a given corpus in English, Italian, French and Chinese. The system analyzes the document by computing a various set of **features** relative both to the corpus itself and to pre-elaborated reference corpora in order to identify and rank the most relevant candidates.
- Developed a multilingual clustering system able to automatically assign domain labels to a given document in the context of creating a corpus of document tagged by WordNet Domain Classes and improving the BabelNet domain label assignment. The system uses **Babelfy** (<http://babelfy.org>) and **BabelNet** (<http://babelnet.org>) as knowledge base and sense inventory.

Scholarships

- December 2014 - Scholarship to attend the XIII AI*IA **Symposium on Artificial Intelligence** organized by AI*IA held in Pisa (Italy).
- June 2015 - Scholarship issued by the AI*IA association to attend the **11th Summer School on Ontology Engineering and the Semantic Web** held in Bertinoro (Italy).
- September 2015 - Scholarship issued by the AI*IA association to attend the #A14, the **14th Italian Conference on Artificial Intelligence** held in Ferrara (Italy).

Other activities

- Certificate of training as a Sound Technician.
- Course of modern Jazz guitar at the music school Music Academy in Rome with Michelangelo Piperno.

PUBLICATIONS

2015

- Federico Scozzafava, Alessandro Raganato, Andrea Moro and Roberto Navigli, **Automatic Identification and Disambiguation of Concepts and Named Entities in the Multilingual Wikipedia**. 14th Conference of the Italian Association for Artificial Intelligence (**#A14**)

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