

Andrea Zugarini– Curriculum Vitae

Personal Information

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Nationality Italian
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Current Position

2017- now **PhD Student** in Smart Computing
Universities of Florence and Siena, Italy
Advisor Prof. Marco Maggini

Research Interests

I have always been interested in Machine Learning and Optimization problems. In the last few years I mostly worked on Natural Language Processing.

The goal of my research project is in Conversational Agents applications, which involve Information Extraction and Language Generation. I am currently working in Text Generation, with particular focus on poem generation. My interests include also, word representations, recurrent neural networks, transfer and few-shot Learning.

Education

- 2017** **M.S. (cum Laude)**, Computer and Automation Engineering, Università degli Studi di Siena
Advisor Prof. Marco Gori
Thesis:
Information Extraction by Learning Deep Architectures from Constraints
- 2014** **B.S.** School of Computer Engineering, Università degli Studi di Firenze - Dipartimento di Ingegneria
Advisor Prof. Fabio Schoen
Thesis:
Utilizzo di Algoritmi di Clustering per l'Ottimizzazione di Strutture Molecolari (Clustering techniques for molecular structures optimization)
- 2010** High school diploma: Scientific Certificate, Liceo Scientifico Italo Calvino - Città della Pieve, (PG) Italy
mark 100/100

Academic Experiences

Mar 2020 **Lecturer**, department of Philology and Literary Criticism:
Master INFOTEXT - Basi di Dati (*Databases*),
Master in Informatica del Testo ed Edizione Elettronica, 27 hours

- May 2019** **Lecturer**, Trade, turism and services association of Arezzo:
HTML, CSS3, XML (*Web Class*),
Digital Media Specialist Certificate, 40 hours
- Mar 2019** **Lecturer**, department of Philology and Literary Criticism:
Master INFOTEXT - Basi di Dati (*Databases*),
Master in Informatica del Testo ed Edizione Elettronica, 27 hours
- Feb 2018** **Lecturer**, department of Philology and Literary Criticism:
Master INFOTEXT - Basi di Dati (*Databases*),
Master in Informatica del Testo ed Edizione Elettronica, 27 hours

Publications

Journals

- 2019** M. Maggini, G. Marra, S. Melacci, A. Zugarini:
Learning in Text Streams: Discovery and Disambiguation of Entity and Relation Instances
Accepted to IEEE Transactions on Neural Networks and Learning Systems - TNNLS
- 2018** O. Spiga, V. Cicaloni, A. Zatkova, L. Millucci, G. Bernardini, A. Bernini, B. Marzocchi, M. Bianchini,
A. Zugarini, A. Rossi, M. Zazzeri, A. Trezza, B. Frediani, L. Ranganath, D. Braconi, A. Santucci:
**A new integrated and interactive tool applicable to inborn errors of metabolism:
Application to alkaptonuria**
Computers in biology and medicine - Volume 103, 1-7

International Conferences

- 2019** A. Zugarini, S. Melacci, M. Maggini:
Neural Poetry: Learning to Generate Poems Using Syllables
International Conference on Artificial Neural Networks - ICANN 2019, 313-325
- 2019** A. Zugarini, S. Melacci, M. Maggini:
Neural Paraphrasing by Automatically Crawled and Aligned Sentence Pairs
Sixth International Conference on Social Networks Analysis, Management and Security (SNAMS) 2019, 429-434
- 2018** G. Marra, A. Zugarini, S. Melacci, M. Maggini:
An Unsupervised Character-Aware Neural Approach to Word and Context Representation Learning
International Conference on Artificial Neural Networks - ICANN 2018, 126-136
- 2018** A. Zugarini, J. Morvan, S. Melacci, S. Knerr, M. Gori:
Combining deep learning and symbolic processing for extracting knowledge from raw text
IAPR Workshop on Artificial Neural Networks in Pattern Recognition - ANNPR 2018, 90-101

Technical Reports

- 2017** F. Giannini, V. Laveglia, A. Rossi, D. Zanca, A. Zugarini
Neural Networks for Beginners. A fast implementation in Matlab, Torch, TensorFlow
arXiv preprint arXiv:1703.05298
- 2016** V. Cicaloni, A. Zugarini, A. Rossi, M. Zazzeri, A. Santucci, A. Bernini, O. Spiga
**Towards an integrated interactive database for the search of stratification biomarkers
in Alkaptonuria**
PeerJ Preprints

Attended Conferences and Workshops

- Sep. 2020** TAILOR Workshop, ECAI 2020
Online
- Sep. 2019** International Conference on Artificial Neural Networks - ICANN,
Munich (Greece)
- Jun. 2019** Summer School on Optimization, Big Data and Applications - OBA,
Veroli (Italy)
- Jul. 2019** ACDL Satellite Workshop on Graph Neural Networks,
Siena (Italy)
- Sep. 2018** IAPR Workshop on Artificial Neural Networks in Pattern Recognition - ANNPR,
Siena (Italy)

Peer-Reviewer

Journals

IEEE Transactions on Neural Networks and Learning Systems - TNNLS
Neural Processing Letters - NEPL
Annals of Mathematics and Artificial Intelligence - AMAI

Conferences

International Conference on Artificial Neural Networks - ICANN 2020

Grants and Awards

- **Three years Ph.D. Scholarship at Smart Computing, University of Florence, Italy**
- **Neural Nets for Conversational Agents, DIISM one year scholarship, funded by CogniTalk**
- **Mediaset Infinity Hackathon, Web Marketing Festival, Jun. 2018 - Rimini (Italy), member of the winning team**
- **SoBigData Soccer Data Challenge, Oct. 2018 - Pisa (Italy), member of the winning team**
- **Winner of the student merit award of Computer and Automation Engineering M.S., academic year 2015–2016, Università degli Studi di Siena**

Internships

- May - Aug 2020** Applied Science Intern, **Amazon Alexa**, Turin, Italy
- Jun. - Oct. 2017** Internship as software engineer, QuestIT S.r.l. (SI) ITALY,
Backend developer of chatbots applications.
- May 2016 - Apr. 2017** DIISM Siena
I won a research fellowship at Computer and Automation Engineering Faculty
funded by CogniTalk a French startup seated in Nantes.
- Jun. - Dec. 2014** Internship at Frosini Pietre S.r.l.
Web developer.

Technical skills

Operating Systems

Operating Systems: Windows (all versions), Linux (mainly Ubuntu)

Languages

Python, Java, C++, MySQL, Javascript, PHP, HTML5, CSS3, \LaTeX , Lua

Development Env.

Pycharm, Eclipse, NetBeans

Machine Learning

Tensorflow, Pytorch, Torch, Pandas

Misc

Wordpress, Git

Languages

Italian (mother tongue)

English (proficient)

B2 English eligibility obtained during the M.S.