# Edoardo Barba

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## **EDUCATION**

#### SAPIENZA UNIVERSITY

M. Sc. IN ENGINEERING IN COMPUTER SCIENCE Final grade: 110 cum Laude Jan 2019 | Rome, Italy

#### **SAPIENZA UNIVERSITY**

Honors Programme Completed Successfully Dec 2018 | Rome, Italy

#### **ROMA TRE UNIVERSITY**

B. Sc. IN COMPUTER ENGINEERING Final grade: 110 cum Laude Jul 2016 | Rome, Italy

#### LINKS

Twitter: **@edoardo\_barba**Github: **edobobo** 

Website: **edobobo.github.io** Linkedin: **Edoardo Barba** 

#### COURSEWORK

#### **GRADUATE**

Natural Language Processing Neural Networks Machine Learning Big Data Algorithm Design Data Mining

#### **UNDERGRADUATE**

Object Oriented Programming Algorithms and Data Structures Functional Programming Databases Software Design

# SKILLS

#### **PROGRAMMING**

Advanced: Python Intermediate: Kotlin | Java

#### **FRAMEWORKS**

Deep Learning: Pytorch | Pytorch lightning | AllenNLP Machine Learning: Sklearn | Smile NLP: NLTK | Spacy | Stanza

#### **LANGUAGES**

Italian: Mother tongue English: Fluent

## **CURRENT OCCUPATION**

# **SAPIENZA UNIVERSITY OF ROME** | PhD student in Computer Science

Nov 2019 – Present | Rome, Italy

Advisor: Roberto Navigli

Working mainly on Lexical Semantics, more specifically in Word Sense Disambiguation, but I am also interested in Entity Linking and semantically enhanced generative approaches.

# SELECTED PUBLICATIONS

- [1] E. Barba, T. Pasini, and R. Navigli. ESC: Redesigning WSD with extractive sense comprehension. In Proceedings of the 2021 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies, pages 4661–4672, Online, June 2021. Association for Computational Linguistics.
- [2] E. Barba, L. Procopio, C. Lacerra, T. Pasini, and R. Navigli. Exemplification modeling: Can you give me an example, please? In Z.-H. Zhou, editor, Proceedings of the Thirtieth International Joint Conference on Artificial Intelligence, IJCAI-21, pages 3779–3785. International Joint Conferences on Artificial Intelligence Organization, 8 2021. Main Track.
- [3] E. Barba, L. Procopio, and R. Navigli. ConSeC: Word sense disambiguation as continuous sense comprehension. In Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing, pages 1492–1503, Online and Punta Cana, Dominican Republic, Nov. 2021. Association for Computational Linguistics.
- [4] L. Procopio, E. Barba, F. Martelli, and R. Navigli. Multimirror: Neural cross-lingual word alignment for multilingual word sense disambiguation. In Z.-H. Zhou, editor, Proceedings of the Thirtieth International Joint Conference on Artificial Intelligence, IJCAI-21, pages 3915–3921. International Joint Conferences on Artificial Intelligence Organization, 8 2021. Main Track.

# WORK EXPERIENCE

#### **BABELSCAPE** | NLP ENGINEER

Sep 2018 - Oct 2019 | Rome, Italy

- Design and implementation of a module for automatic named entities recognition (NER) in Wikipedia pages. Aim: produce silver-standard datasets for training NER classifiers in multiple languages.
- Development of Extraggo 2.0, a semantic-aware concepts and named entities extraction tool. Main contributions: Designing and implementing a new keyword extraction algorithm based on TextRank as well as proposing a novel word embedding model mainly focused towards explicit components.

# **AWARDS**

Sapienza Honours programme successful completion scholarship.

Sapienza Top-5 in the Admission at Master's degree Honours programme.

Sapienza Wanted the Best Scholarship for academic merits. Roma Tre "Collaboration Scholarship" for academic merits.