

# Gil Rocha

## Curriculum Vitae

Porto, Portugal  
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📁 [gilrocha.github.io](https://github.com/gilrocha)  
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### Personal Information

Date of birth 15/08/1993  
Place of birth Suresnes, Paris, France  
Nationality Portuguese  
Gender Male  
Marital Single  
Status

### Education

2006–2011 **High School - Science and Technology course**  
*Escola Secundária de Paços de Ferreira, Portugal.*

2011–2016 **Integrated Master in Informatics and Computing Engineering (300 ECTS)**  
(B.Sc. and M.Sc.) *Faculty of Engineering, University of Porto, Portugal*

#### Master Thesis:

Title: *ArgMine: Argumentation Mining from Text*

Advisors: Prof. Henrique Lopes Cardoso and Jorge Teixeira

2015–2016 **Erasmus+ Programme, 1st semester 2015/2016**  
*Barcelona School of Informatics, Technical University of Catalonia and Faculty of Mathematics, University of Barcelona, Spain*

I enrolled in five courses (total of 24.5 ECTS) of the Master in Artificial Intelligence and Master in Innovation and Research in Informatics, namely: Professional Practice in Artificial Intelligence, Introduction to Machine Learning, Normative and Dynamical Virtual Worlds, Optimization Techniques for Data Mining, Data Analysis and Knowledge Discovery.

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## Work Experience

09/2014– **Web Development**  
08/2015 JCRSOFT *Paços de Ferreira, Porto, Portugal*

JCRSoft is a software company responsible for the IT sector of some companies from different industrial sectors. I was responsible for the full development of the commercial websites for some of these companies, namely:

- NORTALU: <http://www.nortalu.com>
- CEMEPAFE: <http://www.cemepafe.pt>
- SERVIFLOR Group: <http://www.serviflorgroup.pt>

10/2016– **Research Assistant**  
Current *Artificial Intelligence and Computer Science Laboratory, LIACC/FEUP, Portugal*

LIACC is a research unit hosted by University of Porto. LIACC's research goals are aligned with: - Coordination and interoperability of programs requiring distributed and decentralized solutions that cope with dynamic environments (both cooperative and competitive); - Intelligent methods for knowledge extraction; - Software reliability and declarativeness. The research unit is recognized as one the leading Portuguese research institutes on Artificial Intelligence. I worked in the project entitled "ArgMine: Argumentation Mining from Text" which aims to develop a system able to automatic detect, identify and structure the argumentative content presented in natural language textual resources written in Portuguese.

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## Academic & Research Experience

### Research Projects

11/2014– **ArgMine: Argumentation Mining from Text,**  
09/2015 ARTIFICIAL INTELLIGENCE AND COMPUTER SCIENCE LABORATORY  
(LIACC/FEUP) & SAPO LABS, Porto, Portugal,  
Research grant supported by SAPO Labs (FEUP).

This project aims to apply and enrich text mining techniques for the automatic detection and identification of the argumentative structure contained within a piece of natural language text.

Further information can be found at <http://labs.sapo.pt/portfolio/argmine/> and <https://web.fe.up.pt/~ei11124/argmine>

07/2017– **ARGH: Argumentation Hub,**  
Current UNIVERSITY OF PORTO MEDIA INNOVATION LABS, Porto, Portugal,  
Research Member.

The *Argumentation Hub* (ARGH) is a collaborative and interdisciplinary research initiative (involving the Faculty of Engineering, Arts and Law from the University of Porto) created to advance the state-of-the-art in argumentation and related applications. I am one of the founding members of the ARGH lab and currently a research member.

### Teaching

03/2015– **Supervisor of Artificial Intelligence undergraduate course,**  
06/2015 FACULTY OF ENGINEERING, UNIVERSITY OF PORTO, Portugal.

Artificial Intelligence course taught in the 3rd year of the Integrated Master in Informatics and Computing Engineering at FEUP. I was responsible for monitoring the laboratory work that students had to develop during the course.

### Scientific Events

#### Member of Programme Committees and Reviewer:.

- DSIE – Doctoral Symposium on Informatics Engineering, FEUP, Portugal: DSIE'17 (January 31, 2017);
- ISMIS – International Symposium on Methodologies for Intelligent Systems: ISMIS'17 (Warsaw, Poland, June 26-29, 2017);
- IEEE/WIC/ACM - International Conference on Web Intelligence: WI'17 (Leipzig, Germany, August 23-26, 2017);
- IEEE S3C - International Summer School on Smart Cities: IEEE S3C'17 (Natal, Brazil, August 6-11, 2017);
- ENIAC - Encontro Nacional de Inteligência Artificial e Computacional: ENIAC'17 (Uberlândia, Brazil, October 2-5, 2017).

### Supervision of Students

#### MSc Students:.

- Li Yunyu, *Binary Classifier for Argumentation Schemes*, LIACC, February-July 2016 (co-supervised with Prof. Henrique Lopes Cardoso, Jorge Teixeira);
- José Ferreira, *Opinion-based Argumentation Mining*, MIEIC (FEUP), LIACC, March-July 2017 (co-supervised with Prof. Henrique Lopes Cardoso);

### Invited Talks

10/2017 **Challenges in Natural Language Processing: From Semantic Tasks to Argumentation Mining.** *Faculty of Letters, University of Porto, Portugal*

Invited speaker at Jornadas de Análise do Discurso – JADIS VII / MEMITA (together with Prof. Henrique Lopes Cardoso)

- 10/2017 **ArgMine: Argumentation Mining from Text.**  
*Faculty of Engineering, University of Porto, Portugal*  
 Invited speaker at the course Language Processing and Information Extraction (PLEI) from the Doctoral Program in Informatics Engineering (ProDEI) (together with Prof. Henrique Lopes Cardoso)
- 11/2017 **ArgMine: Argumentation Mining from Text.**  
*Faculty of Engineering, University of Porto, Portugal*  
 Invited speaker at the course Intelligent Systems, Interaction and Multimedia Seminar (SSIM) from the Integrated Master in Informatics and Computing Engineering (MIEIC) (together with Prof. Henrique Lopes Cardoso)

## Publications

### Conference Publications

1. Gil Rocha, Henrique Lopes Cardoso, and Jorge Teixeira. **ArgMine: A Framework for Argumentation Mining**. In *Computational Processing of the Portuguese Language - 12th International Conference*, PROPOR 2016, Student Research Workshop, Tomar, Portugal, July 13-15, 2016.
2. Gil Rocha and Henrique Lopes Cardoso. **Coreference Resolution in Portuguese: The Impact of Training Set Generation Approaches**. In *Doctoral Symposium in Informatics Engineering - 12th Edition*, DSIE 2017, Porto, Portugal, January 31, 2017. (nominated for Best Paper Award)
3. Gil Rocha and Henrique Lopes Cardoso. **Towards a Mention-pair Model for Coreference Resolution in Portuguese**. In *Oliveira, E., Gama, J., Vale, Z., Lopes Cardoso, H. (eds.) Progress in Artificial Intelligence - 18th EPIA Conference on Artificial Intelligence*, Springer, LNAI 10423, Porto, Portugal, September 5-8, 2017.
4. Gil Rocha and Henrique Lopes Cardoso. **Recognizing Textual Entailment and Paraphrases in Portuguese**. In *Oliveira, E., Gama, J., Vale, Z., Lopes Cardoso, H. (eds.) Progress in Artificial Intelligence - 18th EPIA Conference on Artificial Intelligence*, Springer, LNAI 10423, Porto, Portugal, September 5-8, 2017.
5. Gil Rocha. **Argumentation Mining from Text Using Semantic Approaches**. In *18th EPIA Conference on Artificial Intelligence - Doctoral Symposium on Artificial Intelligence*, SDIA 2017, Porto, Portugal, September 5-8, 2017.
6. Gil Rocha and Henrique Lopes Cardoso. **Towards a Relation-based Argument Extraction Model for Argumentation Mining**. In *Camelin, N., Estève, Y., Martín-Vide, C. (eds.) 5th International Conference on Statistical Language and Speech Processing*, SLSP 2017, Le Mans, France, October 23-25, 2017.

### Thesis

1. **ArgMine: Argumentation Mining from Text**, graded 18/20. Supervised by Prof. Henrique Lopes Cardoso (LIACC/FEUP) and Jorge Teixeira (LIACC/FEUP and SAPO Labs/UP)

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## Certifications

- 2012 **Portuguese Driving License (Category B)**,  
IMTT, Portugal.
- 2012 **Basic Life Support Course**,  
AEM PORTUGAL.
- 2012 **BEST Local Engineering Competition (Team Design category)**,  
BEST PORTO, FACULTY OF SCIENCE OF UNIVERSITY OF PORTO, Portugal.
- 2013 **BEST Local Engineering Competition (Team Design category)**,  
BEST PORTO, FACULTY OF SCIENCE OF UNIVERSITY OF PORTO, Portugal.
- 2013 **ENEI 2013 - "Encontro Nacional de Estudantes de Informática"**,  
FACULTY OF ENGINEERING OF UNIVERSITY OF PORTO, Portugal.
- 2013 **Talk a Bit Conference**,  
FACULTY OF ENGINEERING OF UNIVERSITY OF PORTO, Portugal.

*Talk a Bit* is a conference organised by students, where invited speakers discuss some of the current hot topics in the area of computer science.

- 2015 **5th Lisbon Machine Learning School (LxMLS 2015)** ,  
INSTITUTO SUPERIOR TÉCNICO, Lisboa, Portugal.

The school covers a range of machine learning (ML) Topics, from theory to practice, that are important in solving natural language processing (NLP) problems that arise in the analysis and use of Web data.

- 2016 **9th Young Researchers Meeting of the University of Porto (IJUP 2016)** ,  
FUNDAÇÃO DA JUVENTUDE - PALÁCIO DAS ARTES, Porto, Portugal.

In this meeting, young researchers (bachelor and master degree students) of the University of Porto publicly present the research projects in which they were involved during the bachelor or master degree. I gave an oral presentation about the research project "ArgMine: Argumentation Mining from Text".

- 2016 **12th International Conference on the Computational Processing of the Portuguese Language (PROPOR 2016)**, Tomar, Portugal.

PROPOR is the main scientific meeting in the area of language and speech technologies for the Portuguese language and on the basic and applied research issues related to this language. The meeting brings together research groups in the area, promoting the development of methodologies, language resources, processing tools, applications and projects that may be shared among researchers and practitioners in the field.

- 2017 **29th European Summer School in Logic, Language and Information (ESSLLI 2017)**,  
UNIVERSITY OF TOULOUSE, Toulouse, France.

ESSLLI brings together logicians, linguists, computer scientists, and philosophers to study logic, language, information and their interconnections. ESSLLI 2017 featured 44 courses at foundational, introductory, and advanced levels, as well as 4 workshops, 4 invited lectures, and a student session to foster interdisciplinary discussion. Courses and workshops are one week long and cover a wide variety of topics within the combined areas of interest: Language and Logic, Language and Computation, and Logic and Computation.

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## Honors and Awards

- 03/2013 **EBEC Porto 2013 (Team Design category) - First Place**,  
BEST PORTO, UNIVERSITY OF PORTO, Portugal.

EBEC - European BEST Engineering Competition. Local BEST Engineering Competition (LBEC) - is held within one University and organised by one Local BEST Group (LBG).

- 04/2013 **EBEC Portugal 2013 (Team Design category) - First Place**,  
BEST PORTUGAL, UNIVERSITY OF AVEIRO, Portugal.

Teams that are winners of Local EBEC rounds in their universities are invited to the next stage. Regional/National BEST Engineering Competition (RBEC/NBEC) - is held within one region/country and organised by one of the LBGs from that region/country. This level has 15 Regional/National BEST Engineering Competition (RBEC/NBEC).

- 08/2013 **EBEC Final 2013 (Team Design category) - Second Place**,  
BEST WARSAW, WARSAW UNIVERSITY OF TECHNOLOGY, Poland.

European BEST Engineering Competition Final event (EBEC Final) - involves students from more than 87 leading universities represented in BEST. EBEC Final event is organised every year after the second level of competitions as the peak gathering for the finalists that are confident in teamwork, creativity and innovative approach to problems in society or industry.

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## Skills

General	Computer Science, Mathematics, Software Engineering, Design and Analysis of Algorithms, Data Structures, Artificial Intelligence.
Programming languages	C++, C, Java, C#, XSLT, SQL, Prolog, MIPS, Assembly IA-32, Python, VDM++, AMPL
Web Development	JavaScript, HTML, CSS, PHP, Node.js, Bootstrap

Operative System Linux, Windows, Android

Multi-Agent System JADE, JADEX

Databases MySQL, PostgreSQL, SQLite, MongoDB

Machine Learning Tools scikit-learn, CRFsuite, PyStruct, CRF++, TensorFlow, Keras, NumPy, SciPy, Pandas

Others Unity, RabbitMQ, Git, Eclipse, Microsoft Visual Studio, IntelliJ IDEA, Android Studio, UML, Software Design Patterns, Agile software development, CitiusTagger, NLTK,  $\LaTeX$

## Languages

	<i>Reading</i>	<i>Writing</i>	<i>Conversation</i>
Portuguese	Native	Native	Native
English	Very good	Very good	Very good
French	Very good	Good	Good
Spanish	Good	Basic	Basic

## Interests

### Research Interests:

My current research interests are focused in the area of *Artificial Intelligence*, mainly in the following subjects: *Machine Learning*, *Data Mining*, *Natural Language Processing*, *Argumentation Mining*, *Information Retrieval*, *Knowledge Representation and Reasoning*, *Robotics*, and *Multi-Agent Systems*.

### In General:

Science, Technology, Engineering, Computer Science, Software, Mathematics, Physics, Biology, Robotics, Artificial Intelligence, Electronics, Board games, Computer games, Sports, Music, Movies, TV Series, Documentaries, (scientific/adventure/mystery/science fiction) Reading, Logic puzzles.