

Silvio Amir

Curriculum Vitae

Research Topics

Social Media Analysis, Natural Language Processing, Deep Learning, and Machine Learning

Applications in Healthcare, Public Health and the Social Sciences

Education

2018

Ph.D. Information Systems and Computer Engineering,

Instituto Superior Técnico da Universidade de Lisboa, Lisboa, Portugal.

Thesis *Agile Social Media Analysis with Neural Networks*

Advisor Mário J. Silva

Co-Advisor Paula C. Carvalho

Funding Ph.D. scholarship awarded by Fundação para Ciência e Tecnologia (FCT)

2009

Master Computer Science and Engineering (MA),

Faculdade de Ciências da Universidade de Lisboa, Lisboa, Portugal.

Specialization in Software Engineering

Thesis Title *Desenvolvimento e Reengenharia de Aplicações Web de Suporte ao Negócio e Integração com Sistemas de Business Intelligence*

(Development and Re-Engineering of Web Applications for Business Support and Integration with Business Intelligence Systems)

Advisor Luís Antunes

2007

Licenciante Computer Science and Engineering (Lic),

Faculdade de Ciências da Universidade de Lisboa, Lisboa, Portugal.

Academic Experience

2020

Lecturer, Whiting School of Engineering,

Johns Hopkins University, Baltimore (MD), USA.

2019

Visiting Researcher, School of Medicine,

University of California San Diego, La Jolla, San Diego (CA), USA.

Advisor John W. Ayers

2018

2020

Research Fellow, Center for Language and Speech Processing,

Johns Hopkins University, Baltimore (MD), USA.

Advisor Mark Dredze

2016

2017

Research Assistant, CCIS - Machine Learning Lab,

Northeastern University, Boston (MA), USA.

Advisor Byron Wallace

2016

Visiting Researcher, *School of Information*,
University of Texas at Austin, Austin (TX), USA.

Advisor Byron Wallace

2013

2018

Research Assistant, *Data Management and Information Retrieval Group (DMIR)*,
INESC-ID Lisboa, Lisboa, Portugal.

Advisor Mário J. Silva

2011

2012

Junior Research Assistant, *Large-Scale Informatics Systems Lab (LASIGE)*,
Faculdade de Ciências da Universidade de Lisboa, Lisboa, Portugal.

Advisor Mário J. Silva

Teaching

2020

Johns Hopkins University.

Spring 2020 CS 482/682 Machine Learning: Deep Learning (Undergraduate/Graduate)
Credits: 4
Enrollment: 68

Spring 2020 EN 601.466/666 Information Retrieval and Web Agents (Undergraduate/Graduate)
Credits: 3
Enrollment: 41

Industry Experience

2018

Research Scientist, *Good Analytics*, California, USA,
✉ <http://goodanalytics.io/>.

2017

Research Scientist, *Qntfy*, Washington (DC), USA,
✉ <http://www.qntfy.com>.

2008

2010

Software Engineer and IT Services Consultant, *Truewind*, Lisboa, Portugal.

2007

2008

Analyst and Software Developer, *Deloitte Touche & Tohmatsu*, Lisboa, Portugal.

Refereed Publications

Conference

1. Paula Carvalho, Bruno Martins, Hugo Rosa, Silvio Amir, Jorge Baptista, and Mário J. Silva. "Situational Irony in Farcical News Headlines". In: *Computational Processing of the Portuguese Language*. Springer International Publishing, 2020, pp. 65–75
2. Manya Wadhwa, Silvio Amir, and Mark Dredze. "Aligning Public Feedback To Requests For Comments On Regulations.gov". In: *International Conference on Web and Social Media (ICWSM)*. 2020
3. Silvio Amir, Mark Dredze, and John W Ayers. "Mental Health Surveillance over Social Media with Digital Cohorts". In: *Proceedings of the Sixth Workshop on Computational Linguistics and Clinical Psychology*. 2019, pp. 114–120
4. Silvio Amir, Glen Coppersmith, Paula Carvalho, Mário J Silva, and Byron C Wallace. "Quantifying Mental Health from Social Media with Neural User Embeddings". In: *Journal of Machine Learning Research, W&C Track* (2017)
5. Silvio Amir, Byron C Wallace, Hao Lyu, Paula Carvalho, and Silva Mário J. "Modelling context with user embeddings for sarcasm detection in social media". In: *Proceedings of the Conference on Natural Language Learning (CoNLL)* (2016)
6. Wang Ling, Chris Dyer, Alan W Black, Isabel Trancoso, Ramon Fernandez, Silvio Amir, Luis Marujo, and Tiago Luis. "Finding Function in Form: Compositional Character Models for Open Vocabulary Word Representation". In: *Proceedings of the 2015 Conference on Empirical Methods in Natural Language Processing*. Lisbon, Portugal: Association for Computational Linguistics, Sept. 2015, pp. 1520–1530
7. Wang Ling, Yulia Tsvetkov, Silvio Amir, Ramon Fernandez, Chris Dyer, Alan W Black, Isabel Trancoso, and Chu-Cheng Lin. "Not All Contexts Are Created Equal: Better Word Representations with Variable Attention". In: *Proceedings of the 2015 Conference on Empirical Methods in Natural Language Processing*. Lisbon, Portugal: Association for Computational Linguistics, Sept. 2015, pp. 1367–1372
8. Ramón Astudillo, Silvio Amir, Wang Ling, Mario Silva, and Isabel Trancoso. "Learning Word Representations from Scarce and Noisy Data with Embedding Subspaces". In: *Proceedings of the 53rd Annual Meeting of the Association for Computational Linguistics and the 7th International Joint Conference on Natural Language Processing (Volume 1: Long Papers)*. Beijing, China: Association for Computational Linguistics, July 2015, pp. 1074–1084

Journal

9. Silvio Moreira, David S Batista, Paula Carvalho, Francisco M Couto, and Mario J Silva. "Tracking politics with POWER". in: *Program* 47.2 (2013), pp. 120–135

Workshop

10. Silvio Amir, Ramon F Astudillo, Wang Ling, Mário J Silva, Isabel Trancoso, and Rua Alves Redol. "INESC-ID at SemEval-2016 Task 4-A: Reducing the Problem of Out-of-Embedding Words". In: *Proceedings of SemEval* (2016), pp. 238–242
11. Pedro Saleiro, Silvio. Amir, Mário J. Silva, and Carlos Soares. "Tracking Political Opinion on the Web". In: *2015 IEEE International Conference on Computer and Information Technology; Ubiquitous Computing and Communications; Dependable, Autonomic and Secure Computing; Pervasive Intelligence and Computing*. Oct. 2015
12. Silvio Amir, Wang Ling, Ramón Astudillo, Bruno Martins, Mario J. Silva, and Isabel Trancoso. "INESC-ID: A Regression Model for Large Scale Twitter Sentiment Lexicon Induction". In: *Proceedings of the 9th International Workshop on Semantic Evaluation (SemEval 2015)*. Denver, Colorado: Association for Computational Linguistics, June 2015, pp. 613–618
13. Ramón Astudillo, Silvio Amir, Wang Ling, Bruno Martins, Mario J. Silva, and Isabel Trancoso. "INESC-ID: Sentiment Analysis without Hand-Coded Features or Linguistic Resources using Embedding Subspaces". In: *Proceedings of the 9th International Workshop on Semantic Evaluation (SemEval 2015)*. Denver, Colorado: Association for Computational Linguistics, June 2015, pp. 652–656
14. Silvio Amir, Miguel B. Almeida, Bruno Martins, João Filgueiras, and Mário J. Silva. "TUGAS: Exploiting unlabelled data for Twitter sentiment analysis". In: *Proceedings of the 8th International Workshop on Semantic Evaluation (SemEval 2014)*. Dublin, Ireland: Association for Computational Linguistics and Dublin City University, Aug. 2014, pp. 673–677
15. Joao Filgueiras and Silvio Amir. "POPSTAR at replab 2013: Polarity for reputation classification". In: *CLEF 2013 Eval. Labs and Workshop Online Working Notes*. 2013
16. Silvio Moreira, João Filgueiras, Bruno Martins, Francisco Couto, and Mário J. Silva. "REACTION: A naive machine learning approach for sentiment classification". In: *Second Joint Conference on Lexical and Computational Semantics (*SEM), Volume 2: Proceedings of the Seventh International Workshop on Semantic Evaluation (SemEval 2013)*. Atlanta, Georgia, USA: Association for Computational Linguistics, June 2013, pp. 490–494
17. Silvio Moreira, David Batista, Paula Carvalho, Francisco M Couto, and Mário J Silva. "POWER-Politics Ontology for Web Entity Retrieval". In: *Advanced Information Systems Engineering Workshops*. Springer. 2011, pp. 489–500

Invited Talks and Seminars

2016

Representation Learning for Agile Social Media Analysis, SIGAI CNC, Northeastern University, Boston (MA), USA.

2015

Towards Social Media Analysis for Low-Resource Languages, *Priberam Machine Learning Lunch Seminars*, Instituto Superior Técnico, Lisboa, Portugal.

2014

How to build a Twitter Sentiment Classifier: part II, *Sapo Labs Talks*, Sapo Labs Lisboa, Lisboa, Portugal.

2014

How to build a Twitter Sentiment Classifier, *Sapo Labs Talks*, Sapo Labs Lisboa, Lisboa, Portugal.

2014

Análise de Sentimento em Social Media, *Workshop em Jornalismo Computacional*, Faculdade de Engenharia da Universidade do Porto, Porto, Portugal.

Service

Peer-Reviewing

Reviewer and secondary reviewer for ACL, NAACL, EACL, EMNLP, NeurIPS, IJCAI and IJCNLP conferences, and for the Springer Machine Learning Journal

Mentoring

2019

Women In Science and Engineering Program (WISE),
Johns Hopkins University, Baltimore (MD), USA.

Conference Organization

2017

Volunteer, *Machine Learning for Healthcare*,
Northeastern University, Boston (MA), USA.

2015

Volunteer, *Conference on Empirical Methods in Natural Language Processing*,
Instituto Superior Técnico, Universidade de Lisboa, Lisboa, Portugal.

Summer Schools

2017

Laboratory Monitor, *Lisbon Machine Learning Summer School (LxMLS 2017)*,
Instituto Superior Técnico, Lisboa, Portugal.

2015

Laboratory Monitor, *Lisbon Machine Learning Summer School (LxMLS 2015)*,
Instituto Superior Técnico, Lisboa, Portugal.

2014

Laboratory Monitor, *Lisbon Machine Learning Summer School (LxMLS 2014)*,
Instituto Superior Técnico, Lisboa, Portugal.

Volunteer Work

2011

2012

European Voluntary Service Program, *Multikultura Egyesület*, Hungary.

Worked as a volunteer in a refugee camp in Bicske and in a day care center in a problematic neighborhood of Budapest, teaching English and basic computer skills.