

Sina Ahmadi

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Research Interests

- Lexicographic data linking
- Natural language processing
- Machine learning
- Kurdish language processing

Education

- April 2018 - present **Ph.D. in Computer Science and Engineering**
Subject: "*Cross-lingual Data Linking*", supervised by Dr. John P. McCrae
National University of Ireland Galway, Ireland
College of Engineering and Informatics
- Sep. 2016 - Sep. 2017 **Master of Science in Artificial Intelligence (Machine Learning for Data Mining)**
Thesis: "*Attention-based Encoder-Decoder Networks for Spelling and Grammatical Error Correction*", supervised by Dr. Joseph Le Roux and Dr. Nadi Tomeh
Paris Descartes University, Paris, France
Department of Mathematics and Computer Science
- Sep. 2014 - Sep. 2016 **Master of Arts in Natural Language Processing**
Thesis: "*From Text to Text: Natural Text Generation Using Patterns from Corpus*", supervised by Dr. Patrick Paroubek
Sorbonne Nouvelle University, Paris, France
Department of General and Applied Linguistics
- Sep. 2010 - June 2014 **Bachelor of Science in Software Engineering**
Thesis: "*Part-of-speech tagging for Kurdish using a statistical and rule-based approach*", supervised by Dr. Kyumars Sheykh Esmaili
University of Kurdistan, Sanandaj, Iran
Department of Computer and Electrical Engineering

Experience

- June 2019 **Research visitor**, Society for Danish Language and Literature & Centre for Language Technology in Copenhagen, Denmark
A preliminary experiment was conducted on Danish lexicographic data linking, particularly senses in two monolingual dictionaries Ordbog over det danske Sprog (ODS) and Den Danske Ordbog (DDO).

- April 2017 - Sept. 2017 **Research intern**, the Computer Science Laboratory of Paris-North University (LIPN)
Developed neural network models for spelling and grammatical error correction. The performance of (Bidirectional) recurrent neural networks and encoder-decoder networks along with attention mechanism was evaluated.
- Jan. 2016 - June 2016 **Research intern**, Computer Science Laboratory for Mechanics and Engineering Sciences (LIMSI-CNRS)
Natural Language Generation for recommendation of commercial products. This internship was financed by an industrial partner.
- June 2015 - Sep. 2015 **Research intern**, Laboratory of Informatics of Paris6 (LIP6), UPMC
Co-reference resolution by representation learning using neural networks, restricted Boltzmann machine and deep Boltzmann network
- Jan. 2013 - Dec. 2013 **Research volunteer**, Kurdish Language Processing Project, University of Kurdistan
Under the supervision of Kyumars Sheykh Esmaili
Implementation of fundamental tools for Kurdish processing, e.g. stemmer, lemmatizer, spell-checker and, resources such as KurdNet—the Kurdish WordNet

Publications

MAIN RESEARCH TOPICS

2019

- Speranza Giulia, Carola Carlino, and Sina Ahmadi. (accepted) creating a multilingual terminological resource using linked data: the case of archaeological domain in the Italian language. *The Sixth Italian Conference on Computational Linguistics - CLiC-it 2019*, 2019
- John P. McCrae, Carole Tiberius, Anas Fahad Khan, Ilan Kernerman, Thierry Declerck, Simon Krek, Monica Monachini, and Sina Ahmadi. (accepted) the elexis interface for interoperable lexical resources. *Proceedings of Sixth Biennial Conference on Electronic Lexicography (eLex 2019)*, 2019
- Sina Ahmadi* and Tobias Daudert*. CoFiF: A corpus of financial reports in French language. In *Proceedings of the First Workshop on Financial Technology and Natural Language Processing*, pages 21–26, Macao, China, 12 August 2019
- Tobias Daudert and Sina Ahmadi. NUIG at the FinSBD task: Sentence boundary detection for noisy financial PDFs in English and French. In *Proceedings of the First Workshop on Financial Technology and Natural Language Processing*, pages 108–114, Macao, China, 12 August 2019
- Mihael Arcan, Daniel Torregrosa, Sina Ahmadi, and John P McCrae. Inferring translation candidates for multilingual dictionary generation with multi-way neural machine translation. In *Proceedings of the Translation Inference Across Dictionaries Workshop (TLAD 2019)*, Leipzig, Germany, 2019. Proceedings of the LDK 2019 Workshops
- Mihael Arcan, Daniel Torregrosa, Sina Ahmadi, and John P McCrae. Tiad 2019 Shared Task: Leveraging knowledge graphs with neural machine translation for automatic multilingual dictionary generation. *Shared Task on Translation Inference Across Dictionaries*, 2019

- Sina Ahmadi, Mihael Arcan, and John McCrae. Lexical sense alignment using weighted bipartite b-matching. In *Proceedings of the LDK 2019 Workshops*. 2nd Conference on Language, Data and Knowledge (LDK 2019), 2019
- 2018 • Sina Ahmadi, Mihael Arcan, and John McCrae. On lexicographical networks. In *Workshop on eLexicography: Between Digital Humanities and Artificial Intelligence*. Workshop on eLexicography: Between Digital Humanities and Artificial Intelligence, 2018
- Sina Ahmadi. Learning noun cases using sequential neural networks. *arXiv preprint arXiv:1810.03996*, 2018
- Sina Ahmadi. Attention-based encoder-decoder networks for spelling and grammatical error correction. *arXiv preprint arXiv:1810.00660*, 2018

KURDISH LANGUAGE PROCESSING

- 2019 • Sina Ahmadi, Hossein Hassani, and John McCrae. (accepted) towards electronic lexicography for the Kurdish language. *Proceedings of Sixth Biennial Conference on Electronic Lexicography (eLex 2019)*, 2019
- Roshna Abdulrahman, Hossein Hassani, and Sina Ahmadi. Developing a fine-grained corpus for a less-resourced language: the case of kurdish. *WiNLP ACL 2019*, 2019
- Sina Ahmadi. A rule-based kurdish text transliteration system. *ACM Transactions on Asian and Low-Resource Language Information Processing (TALLIP)*, 18(2):18, 2019
- 2017 • Shahin Salavati and Sina Ahmadi. Building a lemmatizer and a spell-checker for sorani kurdish. In *Proceedings of the 8th Language & Technology Conference: Human Language Technologies as a Challenge for Computer Science and Linguistics*, Poznan, Poland, 2017
- 2014 • Purya Aliabadi, Sina Ahmadi, Shahin Salavati, and Kyumars Sheykh Esmaili. Towards building Kurdnet, the Kurdish Wordnet. In *Proceedings of the Seventh Global Wordnet Conference*, pages 1–6, 2014

Poster & Invited talks

December 2019
September 2019
June 2018

Workshop on eLexicography, Galway, Ireland
Insight Student Conference, University College Dublin
AI & the Smart Enterprise, Dublin City University, Dublin

Academic activities

REVIEWING

PC member at 10th Global WordNet Conference 2019 (GWC2019)

TEACHING

Spring 2019
May 2019

Advanced Natural Language Processing (CT5121) at NUI Galway (laboratory sessions)
Tutor at the 3rd Summer Datathon on Linguistic Linked Open Data, Dagstuhl, Germany

SUPERVISION

June-August 2019

Victor Troussel's internship at the Unit for Linguistic Data, Insight Centre for Data Analytics (Master's student from École Polytechnique de l'Université de Nantes)

Honors & awards

February 2019

Top ranked team in Ireland at Google Hash Code 2019
ELEXIS grant for Ph.D. degree at NUI Galway

2018-2022

Ranked 3rd in the Innovation and Creation Competition of University of Tabriz, Tabriz

2012

University of Kurdistan's member in the 36th ACM International Collegiate Programming Contest (Asian Regional), Tehran

2011

Ranked in the top 10% among all applicants for the Nationwide University Entrance Exam (Approximately 3000000 applicants) Iran

2010

Ranked 2nd in Kurdistan Regional High-school Competence of Programming, Iran, 2008

2008

Technical skills

Programming Languages: *Expert in:* Python, Java, Perl, R - *Familiar with:* C++, Octave, C#

Tools and Frameworks: RStudio, Visual Studio, SciPy, Theano, DyNet, L^AT_EX

Database : MySQL, SPARQL

Web technologies: Jekyll, PHP, HTML (and CSS), XML technologies

Interpersonal Skills: Critical Thinking, Data Collection, Literature Reviews, Problem Solving, Self-Management, Confidentiality

Languages

- Kurdish (native)
- English, French, Persian, Arabic
- Modern Greek (A2), German (A1)

Personal interests

Writing, violin playing (2 public performances so far) - Reading - Travelling - Learning

References

Available on demand.