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Department of Nordic Studies and Linguistics
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Short presentation

I am an assistant professor of Natural Language Processing and Computational Linguistics at the Center for Language Technology, University of Copenhagen. My research focuses on data-driven approaches to language technology, especially explainable natural language processing and morphosyntactic analysis. Specifically, I study data-driven syntax, representation learning, and word embeddings. I have introduced tools and techniques to better cope with the typological diversity of languages and improve the efficiency of language processing tools. I have also explored universal patterns in grammatical gender assignments across languages. In addition, I am interested in interpreting large language model representations and adapting them for various tasks.

Qualifications

Pedagogy , Becoming a Teacher in Higher Education, Linköping University
Award Date: 16 Nov 2022

Computational Linguistics, PhD, Uppsala University
Award Date: 8 Sep 2018

Employment

Tenure Track Assistant Professor

Department of Nordic Studies and Linguistics

København S, Denmark

15 Apr 2023 → nu

Department of Nordic Studies and Linguistics

København S, Denmark

15 Apr 2023 → 15 Apr 2023

Postdoctoral Fellow

Department of Computer and Information Science (IDA), Linköping University

Linköping, Sweden

1 Jan 2021 → 15 Apr 2023

Postdoctoral Researcher

Department of Linguistics and Philology, Uppsala University

Sweden

1 Jan 2019 → 31 Dec 2020

Doctorand

Uppsala University

Uppsala, Sweden

1 Jan 2014 → 1 Jan 2018

Research outputs

Efficient Structured Prediction with Transformer Encoders

Basirat, Ali, 14 Mar 2024, In: The Northern European Journal of Language Technology (NEJLT). 10, 1

Digital Conceptual History and the Emergence of a Globalized Climate Imaginary

Boydén, M., Basirat, Ali & Berglund, K., Dec 2022, In: Contributions to the History of Concepts. 17, 2, p. 95-122

Nucleus Composition in Transition-based Dependency Parsing

Nivre, J., Basirat, Ali, Dürlich, L. & Moss, A., Dec 2022, In: Computational Linguistics. 48, 4, p. 849-886 38 p.

An empirical study on the contribution of formal and semantic features to the grammatical gender of nouns

Basirat, Ali, Allasonnière-Tang, M. & Berdicevskis, A., 1 Jan 2021, In: Linguistics Vanguard. 7, 1, p. 2020-0048

Syntactic nuclei in dependency parsing - A multilingual exploration

Basirat, Ali & Nivre, J., 2021, *EACL 2021 - 16th Conference of the European Chapter of the Association for Computational Linguistics, Proceedings of the Conference*. Association for Computational Linguistics (ACL), p. 1376-1387 12 p. (EACL 2021 - 16th Conference of the European Chapter of the Association for Computational Linguistics, Proceedings of the Conference).

Cross-lingual Word Embeddings beyond Zero-shot Machine Translation

Chen, S. & Basirat, Ali, 3 Nov 2020.

An exploration of the encoding of grammatical gender in word embeddings

Veeman, H. & Basirat, Ali, 5 Aug 2020.

Word embedding and neural network on grammatical gender – A case study of Swedish

Allasonnière-Tang, M. & Basirat, Ali, 28 Jul 2020.

Greedy Transition-Based Dependency Parsing with Discrete and Continuous Supertag Features

Basirat, Ali & Nivre, J., 9 Jul 2020.

Real-valued syntactic word vectors

Basirat, Ali & Nivre, J., 3 Jul 2020, In: Journal of Experimental and Theoretical Artificial Intelligence. 32, 4, p. 557-579 23 p.

Cross-lingual Embeddings Reveal Universal and Lineage-Specific Patterns in Grammatical Gender Assignment.

Veeman, H., Allasonnière-Tang, M., Berdicevskis, A. & Basirat, Ali, 2020, p. 265-275.

Shifted Randomized Singular Value Decomposition

Basirat, Ali, 26 Nov 2019.

Linguistic information in word embeddings

Basirat, Ali & Tang, M., 2019, *Agents and Artificial Intelligence - 10th International Conference, ICAART 2018, Revised Selected Papers*. van den Herik, J. & Rocha, A. P. (eds.). Cham: Springer Verlag, p. 492-513 22 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), Vol. 11352 LNAI).

Lexical and morpho-syntactic features in word embeddings a case study of nouns in Swedish

Basirat, Ali & Tang, M., 2018, *ICAART 2018 - Proceedings of the 10th International Conference on Agents and Artificial Intelligence*. Rocha, A. P. & van den Herik, J. (eds.). SCITEPRESS (Science and Technology Publications, Lda.), p. 663-674 12 p. (ICAART 2018 - Proceedings of the 10th International Conference on Agents and Artificial Intelligence, Vol. 2).

Principal Word Vectors

Basirat, Ali, 2018, Uppsala Universitet Acta Universitatis Upsaliensis. 159 p.

A bootstrapping method for development of Treebank

Zarei, F., Basirat, Ali, Faili, H. & Mirain, M., 2 Jan 2017, In: Journal of Experimental and Theoretical Artificial Intelligence. 29, 1, p. 19-42 24 p.

From raw text to universal dependencies – Look, no tags!

de Lhoneux, M., Shao, Y., Basirat, Ali, Kiperwasser, E., Stymne, S., Goldberg, Y. & Nivre, J., 2017, *Rediger CoNLL 2017 - SIGNLL Conference on Computational Natural Language Learning, Proceedings of the CoNLL 2017 Shared Task: Multilingual Parsing from Raw Text to Universal Dependencies*. Association for Computational Linguistics (ACL), p. 207-217 11 p.

Real-valued Syntactic Word Vectors (RSV) for Greedy Neural Dependency Parsing

Basirat, Ali & Nivre, J., 2017, In: NoDaLiDa 2017 - 21st Nordic Conference of Computational Linguistics, Proceedings of the Conference. p. 20-28 9 p.

A statistical model for grammar mapping

Basirat, Ali, Faili, H. & Nivre, J., 1 Mar 2016, In: Natural Language Engineering. 22, 2, p. 215-255 41 p.

Bridge the gap between statistical and hand-crafted grammars

Basirat, Ali & Faili, H., Aug 2013, In: Computer Speech and Language. 27, 5, p. 1085-1104 20 p.

Automatic Enhancement of LTAG Treebank.

Zarei, F., Basirat, Ali, Faili, H. & Mirian, M. S., 2013, p. 733-739.

Automatic enhancement of LTAG Treebanks

Zarei, F., Basirat, Ali, Faili, H. & Mirian, M. S., 2013, In: International Conference Recent Advances in Natural Language Processing, RANLP. p. 733-739 7 p.

An Unsupervised Approach for Linking Automatically Extracted and Manually Crafted LTAGs

Faili, H. & Basirat, Ali, 2011, *An Unsupervised Approach for Linking Automatically Extracted and Manually Crafted LTAGs*. Springer, Vol. 6608. (Lecture Notes in Computer Science, Vol. 6608).

An unsupervised approach for linking automatically extracted and manually crafted LTAGs

Faili, H. & Basirat, Ali, 2011, *Computational Linguistics and Intelligent Text Processing - 12th International Conference, CICLing 2011, Proceedings*. PART 1 ed. p. 68-81 14 p. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); No. PART 1, Vol. 6608 LNCS).

Constructing linguistically motivated structures from statistical grammars

Basirat, Ali & Faili, H., 2011, In: International Conference Recent Advances in Natural Language Processing, RANLP. p. 63-69 7 p.

Augmenting the automated extracted tree adjoining grammars by semantic representation

Faili, H. & Basirat, Ali, 2010, *Proceedings of the 6th International Conference on Natural Language Processing and Knowledge Engineering, NLP-KE, 2010*. 5587766. (Proceedings of the 6th International Conference on Natural Language Processing and Knowledge Engineering, NLP-KE 2010).

Activities

Association for Computational Linguistics (External organisation)

Basirat, Ali (Member)
2021

Nordic Language Processing Laborator (NLPL) (External organisation)

Basirat, Ali (Member)
2017

