Mag. Remo Nitschke M.S.

CV

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⭘ *github.com/remo-help*

Education

2018–2023	**Linguistics PhD Program**, *University of Arizona*
	Major: Syntactic Theory, **Minor**: Computational Linguistics
	Dissertation Topic: Syntax and Semantics of Degree Modification in German Adjectives,
	Advisor: Heidi Harley
2019–2021	**Human Language Technology MS Program**, *University of Arizona*
	Advisor: Mike Hammond
2012–2018	**Teacher Training Program, Magister**, *Karl-Franzens-Universität*, Graz, *Master Equivalent (5-year program)*

Academic Experience

Jobs

March 2021–	**Research Associate**, *University of Arizona*, ToMCAT, Theory of Mind-based Cognitive Architecture for Teams (DARPA Grant: ASIST)
	Within the ToMCAT project I lead a team that maintains and expands an event extraction (EE) system for finding team communication events, among other text-based NLP capabilities.
Spring 2021	**Research Associate**, *University of Arizona*, LIVES Project
	Data restoration and suppport
2019–2020	**Research Assistant**, *University of Arizona, Linguistics*, Prof. Noam Chomsky
	Aiding in data presentations and working on an independent research project
2018–2020	**Teaching Assistant**, *University of Arizona, Linguistics*
2015–2016	**Research Assistant**, *University of Graz, Section of Theoretical English Linguistics, English Dep.*
	Data collection for a research project on Actuality Entailments

Teaching

Fall 2020	**LING 300**. *Introduction to Syntax.* Standalone TA
Spring 2020	**LING 150A**. *Languages in the World (Introduction to Languages and Linguistics).* Section instructor/GTA
Fall 2019	**LING/PHIL 211** *Language, Mind and Brain.* TA/instructional aide
Spring 2019	**LING/ENG 322**. *The Structure and Meaning of Words (Introduction to Morphology and Morphosyntax).* Standalone TA
Fall 2018	**LING 150A**. *Languages in the World (Introduction to Languages and Linguistics).* Section instructor/GTA

Publications

forthcoming Nitschke, R. (2022). "On the Extended Projection of German Adjectives" In: Phoevos Panagiotidis and Moreno Mitrović (Eds.), A^0 – *The Lexical Status of Adjectives* (LFAB 17), pages 219–256. John Benjamins. `https://benjamins.com/catalog/lfab.17.07nit`

accepted Nitschke, R., Wang Y., Chen, C., Pyarelal, A. and Sharp, R. (2022). "Rule Based Event Extraction for Artificial Social Intelligence" In: *Proceedings of Pattern-based Approaches to NLP in the Age of Deep Learning*

published Nitschke, R (2021). "Restoring the sister: Reconstructing a lexicon from sister languages using neural machine translation" In: *Proceedings of the First Workshop on Natural Language Processing for Indigenous Languages of the Americas*, pages 122–130, Online. Association for Computational Linguistics

published Nitschke, R. (2020). Using Genetic Data to Make Linguistic Arguments: Are clicks evidence of late externalization?. *U. Penn Working Papers in Linguistics*, 26(1).

Conference Talks

2022 **Rule Based Event Extraction for Artificial Social Intelligence**, *Gyeongju, Republic of Korea*, PAN-DL at COLING 2022

2022 **Homesign And The Speed Of Externalization: What homesigners can tell us about the externalization of language capacity**, *Quebec, Canada*, Premiére Conférence Internationale sur la Biolinguistique de l'UQTR

2019 **Using Genetic Evidence to Make Linguistic Arguments: pitfalls and opportunities**, *UPenn, Philadelphia*, PLC 43

2019 **Viel Geliebt: German participal adjectives and degree words**, *University of Arizona, Tucson*, Arizona Linguistics Circle 13

2018 **On the Extended Projection of German Adjectives**, *Bled-Slovenia*, A0: The Adjective as a Lexical Category

Posters

2022 **Lessons Learned from a Secondary Analysis Using Natural Language Processing and Machine Learning from a Lifestyle Intervention**, *Baltimore,MD*, 43rd Annual Meeting & Scientific Sessions of the Society of Behavioral Medicine, **(as non-presenting co-author)**

2021 **"Restoring the sister: Reconstructing a lexicon from sister languages using neural machine translation"**, *Online*, AmericasNLP at NAACL-HLT

Invited Talks

2021 **Neural Machine Translation Approaches for Vocabulary Reconstruction Tasks**, *NUI Galway, Ireland*, Cardamon Seminar Series

Publications as Editor

Chief Editor Nitschke, Remo, Jennifer Medina, Gabriela De la Cruz-Sánchez, John W.W. Powell, Luis A. Irizarry-Figueroa, George-Michael Pescaru, Florian Hafner (eds.). (2022). Coyote Papers 24: Proceedings of the Arizona Linguistics Circle 15.

Chief Editor Nitschke, Remo, Damian Y. Romero Diaz, Gabriela De La Cruz Sánchez, John W. W. Powell, Kristina Mihajlović, Luis A. Irizarry-Figueroa, George-Michael Pescaru, Florian Hafner (eds.). (2021). Coyote Papers 23: Proceedings of the Arizona Linguistics Circle 14

Chief Editor	Nitschke, Remo, Damian Y. Romero Diaz, Gabriela De La Cruz Sánchez, John W. W. Powell (eds.). (2020). Coyote Papers 22: Proceedings of the Arizona Linguistics Circle 13

Service

2019-2022	**Abstract Reviews for Arizona Linguistics Circle (annual conference)**
2022	**Reviewer for GPSC travel grants**
2019-2022	**Coyote Papers, Editor in Chief**
2022	**Volunteer for ALC16**
2019-2021	**Mentoring for incoming graduate students**
2021	**Volunteer for ALC15**
2020	**LING Department Graduate Student Faculty Representative**
2020	**Volunteer for ALC14**
2019	**Organization committee for ALC13**
2019	**Volunteer for SAIL**

Industry Experience

Summer 2022	**Research Intern**, *Educational Testing Services*, ETS AI Labs, Integrating SHAP functionality into RSMTOOL: AI Explainability. I integrated SHAP functionality into RSMTOOL (RSMT). RSMT is used by ETS to evaluate machine learning models and assess them for fairness. I added components to the library that allow automatic generation of an explainability report for models generated using ETS' internal sci-kit learn wrapper, SKLL.

Current Research Projects

German Adjectives and Degree Modification	**The Syntax and Semantics of adjectival degree modification**, *Dissertation Project*, I am working on the Syntax and Semantics of degree modification in German adjectives. What is of particular interest to me is the German modifier *viel* (compare English "much") and its selectional properties. *Viel* seems to select for events over states in verbs, nominals, and adjectives, yet it also selects for comparatives. I believe that deriving a consistent syntactic and semantic analysis of this pattern can inform on the status of adjectives generally and contribute to the discussion on Bresnan 1973's hypothesis on English *much*.
Language Evolution	**Emergent Sign Language: CENA**, *Collaboration with: Anderson Almeida da Silva (Universidade Federal do Delta do Parnaíba), Shigeru Miyagawa (MIT and University of São Paulo), and Vitor Nóbrega (University of Hamburg)*, *CENA* is an emergent sign language in Piauí, Brasil, that arose out of a homesign system some 70 years ago (Almeida da Silva & Nevins 2020). We are working on a joint research project to show that (i) humans do not need an external model of language, but can instead devise one of their own (an argument already made by Goldin-Meadow and colleagues in their work on homesign, see for example Brentari & Goldin-Meadow 2017), and (ii) that a homesign system can quickly progress into a full-fledged sign language if there is a community that uses it. While similar arguments have been made on the case of Nicaraguan Sign Language, we argue that *CENA* is different because it was not subject to any outside influences during its genesis due to the fact that it arose in a remote village with no access to other sign languages or sign language educators.

Event Extraction **Informative Event Extraction for Dynamic Domains**, *Collaboration with: Yuwei Wang, Chen Chen (University of Arizona)*, The team I lead within the ToMCAT project maintains a rule based event extraction (EE) system. The domain we work in consists of spontaneous speech within a game-like context. The game setting itself is subject to change with very little notice. This leads to a very dynamic domain that does not lend itself to deep learning approaches. We are looking at ways to utilize our rule-based system to fine-tune a deep learning system. We are also working on co-reference resolution in natural dialogues.

Programming

Languages	Python (confident), Scala (beginner), C++ (beginner)
Libraries	OpenNMT-py, pytorch, beautiful soup, pony ORM, matplotlib, sklearn, shap, pandas, numpy, transformers

Adjacent Skills

Github	Version control with git and Github.
SQLite	Experience with SQLite databases through pony-ORM (Python).
LaTeX	Usage as a text editor, to compile slides, present data, and write templates

Languages

- German, Proficient, Native
- French, Basics
- English, Proficient
- Spanish, Basics