Isabelle Lorge

Personal Information

EMAIL: isabelle.lorge@outlook.com

Experience

Current Postdoctoral Research Assistant, **University of Oxford**
Researching social media polarisation and semantic composition with Natural Language Processing (e-Research lab, Department of Engineering)

2019-2022 AI Researcher, **Arabesque AI**
Creating novel NLP models analysing news and social media data (Twitter, Reddit) for stock market prediction

- Transformer architectures, transfer and one-shot learning, open information extraction from syntactic parsing, supervised and unsupervised relation extraction, knowledge graph construction, Neural Tensor Networks for semantic composition in event embeddings
- Pipeline built with BigQuery (processing millions of records of GDELT data), Elasticsearch and GCP (Argo, Kubernetes, Docker).

May.-July. 2019 Intelligence intern, **ThoughtRiver**
Anomaly detection in legal documents (Faculty Data Science fellowship 14th)

- Data cleaning and transformation for topic detection
- Building model successfully detecting and ranking contextual anomalies in contracts

Nov.-Jan. 2019 Computational Linguist, **Mind.ai**
Building engine for symbolic natural language understanding.

- Parsing into syntax-based data structure for deductive and abductive reasoning
- Creating algorithm for feature extraction and ontology making

Apr.-Jul. 2017 Research Intern, **Microsoft Research**
Improving identification and understanding of context-specific features in visually grounded dialogue using deep learning networks.

- Creating novel referring task and gathering data in human participants
- Building referring expressions generator

Education

2015-2019 Ph.D in Theoretical and Applied Linguistics, **University of Cambridge**
Investigating pragmatic (context-driven) inferences for word learning in bilingual and monolingual children using Bayesian models and human data.

- Designing and implementing tasks for contextual word learning
- Comparing data with Bayesian model predictions

2014-2015   MPhil in Theoretical and Applied Linguistics, **University of Cambridge**

Thesis: 'Exploring the communicative skills of bilinguals: a study of listener-directed speech features'.

- Designing and implementing a novel task to test speech adaptation; computer implementation of cognitive tests
- Data analysis of phonological and phonetic features using speech recognition software (Praat) and R

2012-2014   Masters in Linguistics, **Université Libre de Bruxelles**

(focus on NLP and corpora/annotations in first year , psycholinguistics in second year)

Thesis: metaphor comprehension in bilingual and monolingual children.

- Creating novel contextual metaphor comprehension task
- Analysing results with R

2009-2012   Bachelor in Romance Languages and Literatures, **Université Libre de Bruxelles**

TOOLS

Python, TensorFlow, Keras, Linux/Mac OS X, git, Elasticsearch, GCP, Argo, Kubernetes, Docker, Dgraph, MATLAB, LaTeX, R, Superlab and PsycoPy (stimulus management), Prolific (crowdsourcing).

PUBLICATIONS AND CONFERENCES

2021   I. Lorge and N. Katsos. Bilingual children display comparative strength using prosodic cues for pragmatic word learning (submitted)

2021   I. Lorge and N. Katsos. Monolingual and bilingual children's performance learning words from ostensive teaching (revised manuscript submitted)

2019   I. Lorge and N. Katsos. Bilingual exposure improves use of contrastive inference and prosody in fast mapping. In Proceedings of BUCLD (Boston University Conference on Language Development), 43d edition, Boston, November 2-4. http://www.lingref.com/bucld/43/BUCLD43-28.pdf

2018   Theory of mind or cognitive biases? Factors influencing pragmatic inference and audience design. ESPP18 (European Society for Philosophy and Psychology), Rijeka, Sep 10-13.

2018   When do we read minds? Methodological and developmental variation in pragmatic inference. DUCOG (Dubrovnik Conference on Cognitive Science), 10th edition, Dubrovnik, May 24-27.

2018   I. Lorge and N. Katsos. Listener-adapted-speech: bilinguals adapt in a more sensitive way, Linguistic Approaches to Bilingualism. http://doi.org/10.1075/lab.16054.lor

2017   Investigating pragmatic word learning in bilingual and monolingual children. MEITS (Multilingualism: Empowering Individuals Tranforming Societies) seminar series, Cambridge, Nov. 16th.

2016   Bilinguals' sensitivity to pragmatic information in word learning. UCL Xprag workshop, London, May 21st.

2016   Listener-directed speech: bilinguals adapt in a more sensitive way. Poster presented at ISBPAC (International Symposium on Bilingualism Processing in Adults and Children), Kaiserslautern, May 24-25.

2015   Exploring the communicative skills of bilinguals: A study of listener-directed speech features. Poster presented at UICM5 (Utterance Interpretation and Cognitive Models), 5th edition, Brussels, Sep. 24-25.

2015   Les injonctions alimentaires, un phénomène inexploré: des catégories aux mythes urbains. Le discours et la langue 6, pp.29-48.

2013   Conversational games. LSB's Linguists' Day, Leuven, May 11th.

2012   Mange et tais-toi. Symposium 'Le manger et le dire', Brussels, Sep 19-22.

LANGUAGES

FRENCH: Native   ENGLISH: Fluent   SPANISH: Proficient   DUTCH: Elementary proficiency

TEACHING

2016-2017   Supervisor, Li3 : Language, Brain and Society, University of Cambridge

2013   Teaching Assistant, General Linguistics, Université Libre de Bruxelles

2012   Teaching Assistant, Spanish Diachrony, Université Libre de Bruxelles

ORGANISATION AND VOLUNTEERING

2017-present   reviewer for Linguistic Approaches to Bilingualism

2016-present   part of the Cambridge Bilingualism Network
works to improve communication between bilingualism researchers and the general public through public engagement events, such as the Cambridge Festival of Ideas

2016-present   Student Minds graduate representative,
liaising between organisation and college welfare, advertising events

2016-2018   Coordinator of the Experimental semantics and pragmatics cluster

2016   Co-organiser of workshop Interdisciplinary perspectives on Code-Switching, Cambridge, Oct. 3-4.

2016   Co-organiser of Xprag cluster workshop, May 21st.

2016   Social and Dining officer, St John's college graduate society
organising, coordinating and advertising a variety of events with other officers, liaising with catering and college, managing budget demands, safety issues, sustainability (graduate garden party, graduate symposium, freshers' week, exchanges between colleges)

2015   Co-organiser of UICM5,'The impact of bilingualism on cognitive and linguistic development', Brussels, Sep. 24-25.

SCHOLARSHIPS

2015   St John's College Scholarship (full scholarship for three years of PhD research at the University of Cambridge)

2014   Wiener-Anspach Scholarship (full scholarship for an Mphil degree at the University of Cambridge)