

# Léo Jacqmin

Lannion, France

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## Education

### Aix-Marseille University

PHD IN COMPUTER SCIENCE

Marseille, France

October 2021 – Present

- Thesis' title : Dialogue state tracking in long dialogue contexts and in alignment with knowledge bases
- Advised by Lina M. Rojas Barahona (Orange) and Benoit Favre (Aix-Marseille University)

### University of Lorraine

MSC IN NATURAL LANGUAGE PROCESSING

Nancy, France

September 2019 – August 2021

- Highest honors, grade: 16.7/20, rank: 2/22

### University of Liège

BA IN TRANSLATION AND INTERPRETING

Liège, Belgium

September 2015 – June 2018

- Erasmus exchange semester at the University of Innsbruck

## Experience

### Orange

INDUSTRIAL PHD CANDIDATE

Lannion, France

October 2021 – Present

- Implemented and evaluated Transformer models (T5) for robust language understanding in task-oriented dialog systems
- Authored research in NLP, surveying, reviewing, and publishing two articles in top conferences
- Placed first out of six research teams in the 11th Dialog System Technology Challenge track on spoken dialog understanding

### Orange

R&D INTERN

Lannion, France

March 2021 – August 2021

- Researched multitask approaches to multilingual opinion mining based on pre-trained language models (BERT)
- Proposed and implemented a transfer learning approach to analyze comments in languages with no access to annotated data
- First authored one paper at EMNLP workshop

### Cognate AI

NLP CONSULTANT

Remote

January 2021 – March 2021

- Built a pedagogical tool for the automatic correction of written productions of English learners
- Combined a deep learning model with rule-based approaches to provide error correction and personalized feedback

### ATILF - CNRS

RESEARCH INTERN

Nancy, France

June 2020 – August 2020

- Collected and cleaned over 30 GB of raw textual data for training word embeddings
- Automated a training and evaluation pipeline for sets of word embeddings (Word2vec, fasttext, GloVe, ELMo and BERT)
- Researched data distribution for definition modeling with SentencePiece using data stored in RDF format

## Projects

### GECKo+: a Grammatical and Discourse Error Correction Tool

- Implemented an English writing assistant tool using two state-of-the-art models for grammar error correction and sentence ordering
- Built a web app that corrects spelling, grammatical, and discourse mistakes given a user input text using Flask, CSS and HTML
- Deployed this web app using Docker and Azure: [github.com/psawa/gecko-app](https://github.com/psawa/gecko-app)

## Skills

**Programming** Python, SQL, HTML, CSS, LaTeX

**Development tools** Shell scripting, Git, Docker, Azure, Slurm, regex

**Data science libraries** scikit-learn, PyTorch, Hugging Face Transformers, pandas, NumPy, spaCy, NLTK, Gensim

**Languages** French (native), English (C2), German (B2), Dutch (A2), Spanish (A1)

## Publications

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**L. Jacqmin**, L. Rojas Barahona, B. Favre "Do you follow me?": a Survey of Recent Approaches in Dialogue State Tracking, In Proceedings of the 23rd Annual Meeting of the Special Interest Group on Discourse and Dialogue (SIGDIAL), 2022.

**L. Jacqmin**, "« Est-ce que tu me suis ? » : une revue du suivi de l'état du dialogue", in Actes de la 29e Conférence sur le Traitement Automatique des Langues Naturelles. Volume 2 : 24e REncontres jeunes Chercheurs en Informatique pour le TAL (RECITAL), 2022.

**L. Jacqmin**, G. Marzinotto, J. Gromada, E. Szczekocka, R. Kołodyński, G. Damnati, "SpanAlign: Efficient Sequence Tagging Annotation Projection into Translated Data applied to Cross-Lingual Opinion Mining", in Proceedings of the Seventh Workshop on Noisy User-generated Text (W-NUT 2021), 2021.

E. Calò\*, **L. Jacqmin**\*, T. Rosemblatt\*, M. Amblard, M. Couceiro, A. Kulkarni, "GECKo+: a Grammatical and Discourse Error Correction Tool", in Actes de la 28e Conférence sur le Traitement Automatique des Langues Naturelles (TALN). Volume 3: Démonstrations, 6 2021.