

CURRICULUM VITAE - ERIN PACQUETET

Data Scientist - SCIAM
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EDUCATION

Last updated 2025-06-17

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- Ph.D. in Linguistics** 2024
University at Buffalo
Dissertation: The effect of linguistic properties on typing behaviors and production processes
(Committee: Jean-Pierre Koenig, Rui Chaves, Cassandra Jacobs, Christian DiCanio)
- M.S in Computational Linguistics** 2021
University at Buffalo
M.S. Project: Processing keystroke data for linguistic analysis
- M.A. in English Linguistics** 2018
Université Paris Diderot
Phonetics and Phonology minor
1 year Academic Exchange at the University of Arizona
M.A. Thesis: Investigating the Hierarchy of Constituency Through Keystroke Log
(Committee: Nicolas Ballier, Benoît Crabbé)
- B.A. in Anglophone Studies** 2016
Université Paris Diderot
1 semester Academic Exchange at the University of Nottingham

PUBLICATIONS

Research papers:

Proto: A Neural Cocktail for Generating Appealing Conversations - Saha, Das, Soper, **Pacquetet**, Srihari 2021
In 4th Proceedings of the Alexa Prize

Conference Proceedings:

Logging Keystrokes in Writing by English Learners - Velentzas, Caines, Borgo, **Pacquetet**, Hamilton, Arnold, Nicholls, Buttery, Gaillat, Yannakoudakis, Ballier 2024
LREC-COLING 2024

Let's Chat: Understanding User Expectations in Socialbot Interactions - Soper, **Pacquetet**, Saha, Das, Srihari 2022
Proceedings of the Second Workshop on Bridging Human-Computer Interaction and Natural Language Processing

Prototype de feedback visuel des productions écrites d'apprenants francophones de l'anglais sous Moodle (*Visual feedback prototype for English learner's written productions on Moodle*) 2019
- Ballier, Gaillat, **Pacquetet**
EIAH 2019

Investigating Keylogs as Time-Stamped Graphemes - Ballier, **Pacquetet**, Arnold 2019
Grafematik 2018

PRESENTATIONS & POSTERS

Invited talks:

Pre-processing keystroke logs for linguistic analysis - **Pacquetet** 2023
Deep Learning for Language Assessment Closing Workshop - November, Paris - France

Refereed by Abstract:

Predicting CEFR levels for learners of English with keylogging metrics, an exploratory study-
Al Sawar, **Pacquetet**, Mallart, Simpkin, Ballier 2025
CORIA-TALN 2025, DynTAL Workshop - June, Marseille -France

Logging Keystrokes in Writing by English Learners - Velentzas, Caines, Borgo, **Pacquetet**,
Hamilton, Arnold, Nicholls, Buttery, Gaillat, Yannakoudakis, Ballier 2024
LREC-COLING 2024 - May, Torino - Italy

Let's Chat: Understanding User Expectations in Socialbot Interactions - Soper, **Pacquetet**,
Saha, Das, Srihari 2022
HCI+NLP 2022- July, Seattle, WA - USA

Using keystroke logs to analyze CMC - **Pacquetet** 2021
Poster - *CMC-Corpora 2021 - October, Nijmegen - Netherlands*

Prototype de feedback visuel des productions écrites d'apprenants francophones de l'anglais
sous MOODLE - Ballier, Gaillat, **Pacquetet** 2019
Poster - *EIAH 2019 EdTech Forum - June , Paris - France*

Investigating Keylogs as Time-Stamped Graphemes - Ballier, **Pacquetet**, Arnold 2018
Talk - *Grafematik June, Brest - France*

Other academic presentations:

Investigating typing bursts as a linguistic unit - **Pacquetet** 2019
Qualifying Paper Presentation - December, Buffalo NY - USA

French Multi-word expression and their structural differences in treebanks - **Pacquetet** 2019
Poster - *CSE Departmental Demo Day - May, Buffalo NY - USA*

Annotation of Multi-word expression in the French Treebank - **Pacquetet** 2018
Poster - *CSE Departmental Demo Day - December, Buffalo NY - USA*

Outreach:

Fiabilité dans l'ère de l'IA générative : le RAG pour gérer les hallucinations - **Pacquetet**, Jara 2025
Meet-up Dev, April, Paris - France

GRANTS AND AWARDS

Mark Diamond Research Fund Grant \$1995 2022

Graduate student research funding \$399 2022

Dept. of Linguistics, University at Buffalo.

3rd place of Alexa Prize Socialbot Grand Challenge 4 \$50,000 2021

PROTO team, Amazon

Alexa Prize Team Research Grant \$250,000 2020

PROTO team, Alexa Prize Socialbot Grand Challenge 4, Amazon

Linguistics Fellowship Award 2018 - 2019

Dept. of Linguistics, University at Buffalo.

Merit-based Five-Year Full Tuition Scholarship

2018 - 2023

Dept. of Linguistics, University at Buffalo.

Erasmus+ Scholarship

2016

WORK EXPERIENCE

Data scientist

2024 - Now

SCIAM

- Developed a client-facing RAG LLM chatbot from scratch on Azure using Python.
- Designed the chatbot architecture and crafted optimized prompts to maximize response relevance.
- Implemented guardrails to ensure security, reliability, and compliance in interactions.
- Created evaluation datasets and defined methodologies to measure, track, and improve performance.
- Conducted research projects and outreach in the fields of Generative AI and NLP.

Data scientist

2022 - 2024

IDEX project - Deep Learning for Language Assessment (DLLA)

- Collected and managed large datasets of user data.
- Designed and implemented an algorithmic ETL pipeline and an automated database processing API.
- Developed and computed key metrics for data analysis and model design.

Research assistant

2020 - 2022

University at Buffalo - Under the supervision of Dr. Fabiola Henri

- Developed and implemented automated scripts for data collection and categorization.
- Implemented data quality verification protocols.
- Managed a database dedicated to Creole languages.

Linguistic specialist

2020 - 2021

Amazon Alexa Prize - Team Proto

- Helped deploy and manage the project on AWS, funded by a competitive grant (\$250 000).
- Designed and implemented a linguistic model for generating chatbot responses, using advanced NLP techniques.
- Conducted in-depth, result-driven analyses, created interactive dashboard visualizations and provided feedback on a corpus of 346 554 responses.
- Developed an automatic data categorization method that optimized data management, resolving a methodological bottleneck.
- Delivered high-quality data-driven feedback that allowed for a quick product version turnaround which was highlighted as a key contributor to our team's success.

Graduate Teaching Assistant

2018 - 2020

University at Buffalo - Undergraduate Linguistics

2022 - 2023

- Developed, prepared and taught course material
- Evaluated and graded examinations, assignments and papers
- Held office hours

- Prepared and taught course material as instructor of record
- Evaluated and graded examinations, assignments and papers
- Organized weekly "Francophone Tables" (informal discussion and activities in French)
- Weekly Tutoring

COURSES TAUGHT

Instructor of record in Linguistics:

Roots of English

Spring 2020 - University at Buffalo

Teaching Assistant in Linguistics:

Languages of the World

Spring and Fall 2023 - University at Buffalo

Language, Society, and the Individual

Fall 2022 - University at Buffalo

Roots of English

Fall 2019 - University at Buffalo

Language in Pluralistic America

Spring 2019 - University at Buffalo

Introduction to Linguistic Analysis

Fall 2018 - University at Buffalo

Instructor of record in French:

French 102 (2 sections)

Spring 2018 - University of Arizona

French 201 (2 sections)

Fall 2017 - University of Arizona

Other relevant experiences:

ESL summer camp resource counselor

2016 & 2017

SKILLS

Programming Languages

Python, R, Perl, Javascript

Libraries

NLTK, CoreNLP, SpaCy, scikit-learn, Transformer models

Keras, TensorFlow, Pytorch, Pandas, Numpy

Data Management and Visualization

SQL, Tableau, Power BI, Matplotlib, ggplot2, Powerpoint

Web Development

HTML, CSS, JavaScript

Tools

Jupyter Notebooks, Visual Studio, LaTeX, Git, GitHub

Human Languages

French (Native), English (Bilingual), German (B1)

ACADEMIC AND ADMINISTRATIVE SERVICE

Chief Excellence Officer - Graduate Linguistics Association, University at Buffalo

2022-2023

Member - Colloquium Committee, University at Buffalo

2022-2023

Member - Departmental Space & Resources Committee, University at Buffalo

2021-2023

Coordinator - Syntax and Semantics research group, University at Buffalo

2021-2023

Listserv manager - Graduate student listserv managing, University at Buffalo

2021-2023

Member - Departmental Diversity Committee, University at Buffalo

2020-2023

Co-author - "Addressing Institutional Racism in UB Linguistics" document

2020

Volunteer - Grievance committee graduate student volunteer, University at Buffalo

2020

Reviewer - Mark Diamond Research Fund (MDRF) grant review

2020

Webmaster - Graduate Linguistics Association, University at Buffalo

2019-2022

Chief Excellence Officer - Graduate Linguistics Association, University at Buffalo

2018-2019

Volunteer - Research Seminar: *Disorder : Histoire sociale des mouvements punk/post-punk*

2015