Gabrielle Gaudeau | PhD Student

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FDUCATION

UNIVERSITY OF CAMBRIDGE PhD Natural Language Processing

Cambridge, UK Oct 2023 - Present

- Research. Automated Essay Scoring in partnership with Cambridge University Press & Assessment.
- Interests. AI&ML, NLP and LLMs, Explainable/Interpretable AI, Human-Centered AI, Education.
- Supervisors. Paula Buttery and Andrew Caines, fully funded by the Cambridge ALTA Institute.
- Teaching. Teaching assistant for the Cambridge University course "1A Scientific Computing" and supervisor for "1A Databases". Outreach tutor for the Cambridge Higher Aspirations Scheme: created and delivered a 2-month "Introduction to AI" course to Y12 high-school students.
- Volunteering. Postgraduate representative on both the Buildings & Environment and Student Forums.

MPhil Advanced Computer Science - Distinction

Oct 2022 - Jun 2023

- Research. Dissertation on Multi-Task Learning for Multi-Dimensional Essay Scoring (78%).
- Specialisation. Natural Language Processing (NLP) and Machine Learning.
- Award. Wolfson College Jennings Prize for outstanding academic accomplishments (£300).

UNIVERSITY OF EDINBURGH

Edinburgh, UK

BSc Hons Computer Science & Mathematics - First Class

Sep 2018 - Jul 2022

• Research. Honours Dissertation on Elliptic Curve Cryptography (80%).

LYCÉE FRANÇAIS CHARLES DE GAULLE

French General Scientific Baccalaureate (Math major) - Distinction (19.92/20)

London, UK Sep 2005 - Jun 2018

WORK EXPERIENCE

TECHWOLF | NLP Research Intern

Ghent, BELGIUM | Jul 2023 - Sep 2023

A 9-week internship in the Research team of an HR Tech scale-up company which leverages the power Machine Learning to offer insights into the skills of a company's workforce. My work focused on automating the process of adding new skills to the TechWolf Skills Ontology, an in-house dictionary of unique skills which sits at the very core of their product, as new industries emerge.

- **Project.** Using pre-trained **Large Language Models**, I developed an **IOB-labelling model** capable of discovering new skills in text and fine-tuned it on a dataset of 1000 sentences that I labelled myself. Once extracted, the potential new skill spans were compared to the existing ones in the Skills Ontology, and matched using embedding cosine similarity. Finally, for any new found skill, I automatically generated potential synonymous forms using **traditional parsing methods and dictionaries** (e.g., WordNet).
- Research. Deep literature review of the concept of skill in the fields of Psychology, Economics and HR.

MICROSOFT | Software Engineer Intern

Oslo, NORWAY | Jun 2021 - Sep 2021

A 12-week remote internship with the FAST CAR Team working with the Contacts & People Relationships APIs for Office 365.

• **Project.** Design, implementation, and testing of a **C# mailbox processor** which extracts social-media accounts from a user's personal emails, infers their owners, and adds the data to the user's own Contacts.

J.P. MORGAN & CHASE | Software Engineer Intern

Glasglow, UK | Jun 2020 - Aug 2020

• **Project.** In a group, design and implementation of a **Python Django web app** for care-experienced young people: a tech solution to the challenges the Scottish charity MCR Pathways faced due to COVID-19.

PUBLICATIONS & REVIEWING

- Assessing how accurately Large Language Models encode and apply the Common European Framework of Reference for Languages. Luca Benedetto, Gabrielle Gaudeau, Andrew Caines, Paula Buttery (2024). Computers and Education: Artificial Intelligence.
- Emergency reviewer for ACL 2025, program committee member and reviewer for WRAICOGS @ COLING 2025, secondary reviewer for BEA 2024, reviewer for LXAI @ NAACL 2024.

Programming: Python, Java, C#, SQL, Haskell

Machine Learning tools: Pandas, NumPy, Scikit-learn, PyTorch, Comet.ml

Technology: Git, Docker, Azure Cloud, PTFX, Figma

Languages: French (native), English (fluent), Spanish (B2), Japanese (B1)