Gabrielle Gaudeau | PhD Student

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EDUCATION

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
BSc Hons Computer Science & Mathematics - First Class

Edinburgh, UK
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

IBM RESEARCH | Generative AI in Sustainability Intern   Hursley, UK | Jun 2025 – Sep 2025

*A 12-week internship working on adapting an IBM Granite model to the Chemistry domain. Curated a dataset of different chemistry tasks (e.g., SMILES completion) and then used **GRPO** to fine-tune a series of different base **Large Language Models (LLMs)** models to create a **general-purpose chemistry reasoning model**. Also created a series of agents/tools to solve the chemistry tasks and explored an **agentic system** alternative to the monolithic chemistry reasoning model approach. These models were evaluated on a series of chemistry benchmarks (MMLU Pro Chemistry, ChemBench Mini, and ether0). This work led to a paper which was submitted to the **SEA @ NeurIPS 2025 workshop** (under review).*

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 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.

MICROSOFT | Software Engineer Intern   Oslo, NORWAY | Jun 2021 – Sep 2021

*A 12-week remote internship where I designed, implemented, and tested 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.*

PUBLICATIONS & REVIEWING

- Rubrik's Cube: Testing a New Rubric for Evaluating Explanations on the CUBE dataset. Diana Galvan-Sosa, Gabrielle Gaudeau, Pride Kavumba, Yunmeng Li, Hongyi gu, Zheng Yuan et al. (2025). *Accepted to ACL 2025.*
- Beyond the Gold Standard in Analytic Automated Essay Scoring. Gabrielle Gaudeau. (2025). *Accepted to ACL Student Research Workshop (SRW) 2025.*
- Assessing how accurately Large Language Models encode and apply the Common European Framework of Reference for Languages. Luca Benedetto, Gabrielle Gaudeau et al. (2024). *Computers and Education: AI.*
- 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, LaTeX, Figma   **Languages:** French (native), English (fluent), Spanish (B2), Japanese (B1)