

LUCIA EVE BERGER

lucia.berger@mail.mcgill.ca, Montreal
Citizenship: Canadian, USA & Italy.

EXPERIENCE

HINGE HEALTH

Senior Machine Learning Scientist

Canada
02.2025 –

- Spearheaded the deployment of LLM-personalized exercise therapy systems for high risk patients.
- Implemented NLP models (BERT, topic modeling) to analyze provider-patient conversations, enhancing communication strategies, and physical therapy compliance.
- Built unsupervised/supervised models for early-experience user segmentation and best-next action. Models informed A/B testing of communication strategies, accelerating model optimization and engagement outcomes.

MICROSOFT

Research Scientist (I, II)

Research Intern

Canada
2021 – 02.2025
2019 – 2020

- Spearheaded the development of multimodal AI GPT-powered toolkits, empowering 500+ users to generate code.
- Conducted research on prompt engineering, image representation, and LLM evaluation, driving product optimization.
- Designed responsible AI initiatives, reducing user harm by 30%, significantly enhancing user safety and trust.
- Improved Automatic Speech Recognition models by 5% in accuracy using cutting-edge techniques
- Earned two promotions in recognition of exceptional contributions in 2021 and 2024 (acquired through Nuance).

GERMAN RESEARCH CENTER FOR ARTIFICIAL INTELLIGENCE WITH SIEMENS

Graduate Researcher

Germany
2017 – 2019

- Implemented a python framework for traffic-sign recognition, 10% improvement using deep learning.
- Enhanced software capabilities with weather forecasting and safety regression functionalities under diverse conditions.
- Built real-time sensor monitoring REST APIs, meeting customer and latency specification.

GENERAL ELECTRIC

Software Engineer, Edison Engineering Rotational Program of 2 years.

Canada
2015 – 2017

SKILLS

PROGRAMMING: Python, Java, C/C++.

RESEARCH AREAS: MultiModal AI, Responsible AI, LLM Prompting, Automatic Speech Recognition, Computer Vision.

LANGUAGES: Fluent in English, Spanish and French. Conversational in Italian and German.

EDUCATION

MILA, QUEBEC INSTITUTE FOR AI: UNIVERSITY OF MONTREAL, MCGILL UNIVERSITY (2024): MS in ML Canada

ERASMUS MUNDUS JOINT MASTER: TU BERLIN & KAISERSLAUTERN, FU BOZEN(2019): MS in CS/SE. Germany, Italy

MCGILL UNIVERSITY, (2015): BA in CS & Economics. Year of AP credits, bursary. 8-month study in Mexico. Canada

PUBLICATIONS

ARXIV *Diagnosing COVID-19 Severity from Chest X-Ray Images Using ViT and CNN Architectures.* 2025

NEURIPS *Improving Harm Reduction Tactics For Multi-Modal Software Solutions: WiML Conference Poster.* 2024

ACOUSTICS WEEK *Enhancing Automatic Speech Recognition of a Regional Dialect: A Pilot Study with Québécois.* 2023

SOFTWARE FOR ML *Refining a Data-Driven Model Uncertainty Framework with Traffic Sign Recognition.* 2022

EUROPEAN CONFERENCE ON SIGNAL PROCESSING *Non-Intrusive Estimation of Speech Signal Parameters.* 2021