

LUCIA EVE BERGER

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EXPERIENCE

MICROSOFT Canada
RESEARCH SCIENTIST II 2019 – present

- Engineered multi-modal, AI-powered (GPT, GPT-v) toolkits to aid end-users complete complex automation.
- Conducted research on prompt-engineering, image representation, and LLM output metric validation.
- Led responsible AI effort for team, reducing harms 30% using prompt-engineering and data-driven approaches.
- Achieved a 5% accuracy gain in production-level Automatic Speech Recognition (ASR) models. Implemented state-of-the-art techniques to reduce ASR error, inference time and computation.
- Wrote and reviewed code in python, and java (10,000+ lines).
- Earned two promotions, transitioning from Research Intern to Research Scientist I and II for outstanding contributions (2021, 2024).

SIEMENS Germany
RESEARCH ENGINEER 2017 – 2019

- Led implementation of a python framework for traffic-sign recognition, 10% improvement using deep learning.
- Expanded the software's capabilities, incorporating functionalities for weather forecasting and safety regressions.
- Built real-time sensor monitoring REST APIs, meeting customer and latency specification.

GENERAL ELECTRIC Canada
SOFTWARE ENGINEER 2015 – 2017

- Participated in the Edison Engineering Development Program, a two-year corporate rotational program.
- Partnered with diverse teams to gather requirements, design features and increase the dependability of light systems.
- Conducted topic modelling on an unstructured corpus, adding business value and structure to technical specs.

EDUCATION

MILA, QUEBEC INSTITUTE FOR AI Canada
Specialized Master in Machine Learning. Awarded Full Scholarship (\$6k). GPA: 3.7/4.0. 2024

ERASMUS MUNDUS: TU Berlin, TU Kaiserslautern, FU Bozen Germany, Italy
Master in Software Engineering. Awarded Full Scholarship (\$48k). First rank (1st/1200). GPA: 4.0/4.0. 2019

MCGILL UNIVERSITY Canada
Bachelor in Computer Science & Economics. Awarded year of AP credits and bursary from Lexington HS, MA. 2015

MACHINE LEARNING PUBLICATIONS

NEURIPS *Improving Harm Reduction Tactics For Multi-Modal Software Solutions: Responsible AI.* 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

SKILLS

PROGRAMMING: Python, Java, C/C++. FRAMEWORKS: TensorFlow, PyTorch.

RESEARCH AREAS: Multi-modal AI & Prompting, Automatic Speech Recognition, NLP, Responsible AI, Computer Vision.

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