

SEIF KOSBAR

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EDUCATION

École Polytechnique de Montréal

M.A.Sc in Computer Engineering, GPA: 4.0/4.0

Relevant Coursework: IFT 6135 - Representation Learning (Mila)

Thesis: Sustainability Smells in Infrastructure as Code

Jan. 2024 - Dec. 2025

Montreal, QC

The American University of Cairo

B.Sc. in Computer Engineering and Mathematics, GPA: 3.7/4.0

ABET Accredited, High Honors, Dean's List

Thesis: GPU Accelerated Data-flow Analysis

Sep. 2018 – Jun. 2023

Cairo, Egypt

WORK EXPERIENCE

Valital Technologies

June. 2025 – Present

AI Engineer

Montreal, QC

- Shipped an agentic AI system that auto-generates consolidated risk reports from compliance screening results, cutting analyst review time by ~80% per case.
- Rebuilt the platform's article clustering pipeline on vector embeddings, reducing end-to-end screening latency by ~40%.
- Replaced a BERT-based classifier with LLM reasoning for article-entity involvement classification, cutting misclassification rate from 18% to 12% (~33% error reduction).
- Added Arabic-language support across the full screening pipeline unlocking MENA market expansion and tackling one of the hardest languages in NLP due to morphological complexity, dialectal variation, and right-to-left script.

Fotopia Technologies

Jul. 2023 – Dec. 2023

Software Engineer

Cairo, Egypt

- Optimized backend infrastructure for reliability and scalability, cutting response latency by 68%.
- Reimplemented the documents scan client resulting in 40% decrease in the scanning pipeline time.

NASA Jet Propulsion Laboratory

May 2023 – Jul. 2023

Research Intern

La Cañada Flintridge, CA (Remote)

- Worked on an openCAESAR research project to explore LLMs' ability to generate software models from software requirements documents.
- Conducted and reported 3 early experiments on GPT-3.5 to generate UMLs from knowledge bases.

Genify

Jun. 2022 – Aug. 2022

Software Engineering Intern

Dubai, UAE (Remote)

- Built the backend infrastructure of Genify's Personal Financial Management (PFM) product suite in 3 weeks.
- Cut the human time needed for API testing to 1 second by building an automated API testing framework.

Tactful

Aug. 2021 – Sep. 2021

Software Engineering Intern

Cambridge, UK (Remote)

- Co-created `Flask FastX`, an open source project aimed at constructing a type-safe framework for efficient development and declaration of Python 3.x-compatible RESTful APIs.
- Developed an API model generator accompanied by unit tests, capable of managing intricate data types extracted from API requests.

PUBLICATIONS

- "Smells-sus: Sustainability Smells in IaC", First Author, MSR 2025

SKILLS

Languages: C/C++, C#, JavaScript, Python, SQL.

Tools: AWS, ASP.NET, Azure, Docker, Flask, Git, Linux, MongoDB, MySQL, NodeJS, NextJS, PyTorch, Tensorflow, React.

ACHIEVEMENTS

- IMC2 Scholarship Supported by **Google**.
- Egyptian Public School Full Scholarship (PSSF) Awardee - Full-tuition funding for undergraduate studies at The American University in Cairo.
- 2nd Place** in ACM ICPC Local Qualifiers '20.
- ACM ICPC Egyptian Finals '20 '21 Finalist.
- 1st place** in the AUC Robotics Line Follower Competition.