

Saad El Dine Ahmed

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EDUCATION

Alexandria University, Faculty Of Engineering Alexandria, Egypt
Bachelor of Science in Computer and Communications Engineering, Minor AI; GPA: 3.9 Oct. 2020 – May 2025

PUBLICATIONS

Infant Cry Detection Using Causal Temporal Representation Dec. 2024
ICASSP 2025 (2025 IEEE International Conference on Acoustics, Speech and Signal Processing) Hyderabad, India

LLM-DetectAIve: A Tool for Fine-Grained Machine-Generated Text Detection Sep. 2024
EMNLP 2024 (The 2024 Conference on Empirical Methods in Natural Language Processing) Miami, Florida

EXPERIENCE

LLMs Python Developer - Full Time - Remote Sep. 2024 – Present
Turing Palo Alto, California

- Data Collection, Fine-Tuning LLMs, Working on RLHF.

Natural Language Processing R&D Engineer - Part Time - On Site Sep. 2024 – Present
Applied Innovation Center - MCIT Alexandria, Egypt

- Developed Quality Assurance Project For Call Center Calls in Egyptian Arabic Language.
- Developing Egyptian chat-bot to help the Egyptian judge.
- Developing a Neural Machine Translation for UAE Government.
- Trying to optimize Whisper-AT as a research problem.

NLP Researcher - Visiting Student - Remote July 2024 – Present
Mohamed Bin-Zayed University Of Artificial Intelligence Abu Dhabi, UAE

- Developed a Machine Generated Detection Application.
- Conducted Research with [Prof.Dr. Preslav Nakov](#), Department Chair of NLP at MBZUAI.
- Data Generation From more than 15 Chat-bots, Model Selection and Evaluation.
- Published a demo paper at [EMNLP 2024](#) conference. - [Paper Link](#) - [Hugging Face Demo Link](#)
- Currently Optimizing the results and Preparing a new Paper.

Natural Language Processing R&D Engineer - Internship - On Site July 2024 – Sep. 2024
Applied Innovation Center - MCIT Alexandria, Egypt

- Developed Several NLP Projects For Several Customers Globally.
- Data Collection, Data Cleaning, Data Visualization, Fine-tuned models and Learnt NLP fundamentals.

Software Engineer - Internship - Remote July 2024 – Aug. 2024
Ejada Systems Alexandria, Egypt

- Developed Applications Using Spring Boot, SQL and NoSQL

MBZUAI Research Internship - On Site May 2024 – June 2024
Mohamed Bin-Zayed University Of Artificial Intelligence Abu Dhabi, UAE

- Developed a Baby Cry Detection Application in Collaboration with Cappella Solutions Company in US.
- Conducted Research with [Dr. Hanan Aldarmaki](#), Assistant Professor of NLP at MBZUAI.
- Data Annotation using Praat, Data Cleaning and Pre-processing, Data Augmentation, Model Selection (Tried over 10 Hybrid Models), Developed a Customized Evaluation metric to compare between models performance.
- Communicated with Cappella Solutions CEO to integrate our model into their application.
- Paper was accepted at the [ICASSP 2025](#) conference.

Research Assistant - On Site Jan. 2024 – May 2024
Alexandria University, Faculty Of Engineering Alexandria, Egypt

- Conducted research with [Dr. Karim Banwan](#) on "Self Optimizing Networks using Machine Learning"

Machine Learning Engineer - Internship - Remote Feb. 2024 – Mar. 2024
Prodigy Infotech Mumbai, India

Software Engineer - Internship - On Site*Siemens*

Aug. 2023 – Sep. 2023

*Alexandria, Egypt***Machine Learning on Mobile Devices - Internship - Remote***Alexandria University, Faculty Of Engineering*

July 2023 – Aug. 2023

Alexandria, Egypt

- Developed a Text to Speech Android Mobile Application.

Software Engineer - Internship - On Site*Sidpec*

Aug. 2022 – Sep. 2022

*Alexandria, Egypt***SKILLS SUMMARY**

Programming Languages and Frameworks: Python (Pandas, NumPy, Matplotlib, Torch...) , Java, C/C++, MySQL, JavaScript, HTML/CSS, PHP, Matlab, VHDL, Pytorch, TensorFlow, Scikit-learn, Keras, React-Node.js , Spring, Docker, Kubernetes, GitLab CI, Proteus, Multisim

Proficient in: NLP, LLms, Machine Learning, Neural Networks, Deep Learning , Computer Vision, Artificial Intelligence, Object Oriented Programming (OOP), SOLID principles, Design Patterns, Operating Systems, Agile Software Development, Data structure and Algorithms, Databases and Problem Solving

RELEVANT COURSES**Academic Courses:**

- | | | | |
|------------------------------|--------------------|--------------------------|---------------------------|
| • NLP | • Deep Learning | • Machine Learning | • Artificial Intelligence |
| • Computer Vision | • Data Mining | • Speech Processing | • CyberSecurity |
| • Probability and Statistics | • Linear Algebra | • Differential Equations | • Advanced Mathematics |
| • Programming | • Data Structures | • Algorithms | • Control Systems |
| • Computer Organization | • Database Systems | • Operating Systems | • Embedded Systems |

Additional Courses:

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| • Deep Learning Specialization - Certificate | • Machine Learning Specialization - Certificate |
| • Supervised Machine Learning - Certificate | • Python 100 Days Of Code Bootcamp - Certificate |
| • Java Programming Master Class Certificate | • AWS Machine Learning Foundation - Certificate |
| • AWS Cloud Foundation - Certificate | |

ACADEMIC PROJECTS**Integrating On-Board Diagnostics (OBD) into Large Language Models (LLMs)** OCT 2024 - Present

- Developing an LLM-integrated system and mobile app to transform OBD data into actionable diagnostics and predictive maintenance insights.

AI Virtual Coach

May 2024 - Present

- Collected Dataset (Videos) For 3 exercises: Squad, Lunges and Single-Leg RDL from approximately 60 people of different ages and genders (with 40% women) across various locations.
- Currently working with Dr. Walid Gomaa to develop and model and prepare a paper.

NMT Using Transformer from scratch - Repository Link

May 2024

- Developed a custom transformer-based encoder-decoder model using the PyTorch library.

Sentiment Analysis of IMDB Reviews Using LSTM and RNN - Repository Link

Apr. 2024

- Used Long Short-Term Memory (LSTM) and Recurrent Neural Network (RNN) models to perform sentiment analysis on IMDB movie reviews.

Face Detection and Recognition System - Repository Link

Apr. 2024

- This project implements a face recognition system with three components: face detection and cropping using OpenCV, model training with InceptionV3, and real-time face recognition with a webcam.

Car Rental System Website - Repository Link

Jan. 2024

- Developed a full-stack user friendly web app for car reservation with authentication and authorization.

AWARDS**Al-Amal Graduate Student Award**

Oct. 2024

LANGUAGES**English:** Fluent**French:** Fluent**Arabic:** Native**German:** Basics