

Nour Eldin Morsy

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[GitHub](#) | [LinkedIn](#) | [Portfolio](#)

SUMMARY

ACM-published co-author. Specialist in Autonomous Systems, and NLP. Participated in one of the first RoboCup@Home Education international teams from the Arab and Middle East region, and high-honors AI graduate.

PROFESSIONAL EXPERIENCE

Premio.Ai Company remote Intern, Research Assistant, Jun 2023 – Oct 2023 **London, UK**

- Conducted research on optimizing Arabic language models through advanced tokenization and vocabulary techniques, designing, and implementing the underlying source code for improved model performance.

EDUCATION

University of Arab Academy for Science and Technology, College of Artificial of Intelligence **Alamein, EGY**

Bachelor of AI in Artificial Intelligence: Intelligent System, Sep 2020 – Aug 2024

Minor Specialization: Robotics

Cumulative GPA: 3.89/4.00 “Excellent with Honors”

Relevant Courses: Deep learning, Advance Robotics, Reinforcement Learning

SKILLS (Order of Fluency High – Low)

Language: Arabic (Native), English (Fluent), Russian (Basic)

Computer Languages: Python, HTML/CSS, C/C++, SQL, Java Script, Arm Assembly

Tools: ROS 1, ROS 2, TensorFlow, PyTorch, Streamlit, GIT, AWS, Docker, Rest API, Bootstrap, CUDA, FortiGate

AI PROJECTS

Home Service Robot, Bachelor Graduation Project, Sep 2023 – May 2024

- Developed an autonomous robotic system using **multi-vision models**, **language grounding**, and a **planning algorithm** for task execution.

Lane Following using Reinforcement Learning (Duckie Town), IN007 Reinforcement Learning, Sep 2022 – Dec 2022

- Developed a reinforcement learning model to optimize lane following for autonomous vehicles using the Q-learning algorithm in a Gazebo simulation environment.

Social interactive Robot using Nao Robot via Arabic LLM, RB412 Cognitive Computing, Sep 2023 – Dec 2023

- Implemented a social-interactive robot using the Chat-GPT large language model (LLM) on a NAO robot, enabling communication and support for elderly individuals in both Arabic and English.

COMPETETION EXPERIENCE

Egyptian Collegiate Programming Contest ECPC Qualifications, Participated, Aug 2022 – Aug 2022 **Alexandria, EGY**

Egyptian Collegiate Programming Contest ECPC, 180th, Jun 2021 – Jun 2021 **Alexandria, EGY**

RoboCup International @Home Education Division, Participated, Jul 2022 – Jul 2022 **Bangkok, TH**

RoboCup Junior National @Home Education Division, Participated, Feb 2023 – Feb 2023 **Alexandria, EGY**

VOLUNTEER EXPERIENCE

Egyptian Collegiate Programming Contest ECPC, Host Volunteer, Jun 2021 – Jun 2021 **Alexandria, EGY**

Egyptian Collegiate Programming Contest ECPC, Host system Volunteer, Aug 2022 – Aug 2022 **Alexandria, EGY**

Arab Collegiate Programming Contest ACPC, Host Volunteer, Mar 2021 – Mar 2021 **Luxor, EGY**

Egyptian Olympiad Informatics EOI, Sys Admin, Sep 2022 – Sep 2022 **Alexandria, EGY**

International Collegiate Programming Contest ICPC, Host system Volunteer, April 2024 – April 2024 **Luxor, EGY**

Egyptian Collegiate Programming Contest ECPC, System Volunteer, Jul 2024 – Jul 2024 **Alexandria, EGY**

PUBLICATIONS

Alrefaie, Mohamed Taher, Nour Eldin Morsy, and Nada Samir. "Exploring Tokenization Strategies and Vocabulary Sizes for Enhanced Arabic Language Models." *arXiv preprint arXiv:2403.11130* (2024).