

Nour Eldin Morsy

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Niederpleiser Str, Sankt Augustin - 53757, Germany

EXPERIENCE

- **Premio.Ai Company** Jun 2023 – Nov 2024
Research Assistant Remote
 - Conducted research on optimizing Arabic language models through advanced tokenization and vocabulary techniques, designing, and implementing the underlying source code for improved model performance.
 - Conducted research on evaluating large language models' ability to interpret temporal semantic shifts, analyzing the historical evolution of word meanings, and assessing model performance through tailored metrics and expert evaluations.

EDUCATION

- **University of Bonn** Oct 2025 – Present
Master of Science in Mobile Robotics Bonn, DE
 - GPA: N/A
- **University of Arab Academy for Science, Technology and Maritime Transport** Sep 2020 – Aug 2024
Bachelor of AI in Artificial Intelligence: Intelligent System Alamein, EGY
 - Minor Specialization: Robotics
 - GPA: 3.89/4.00 "Excellent with Honors"
 - Relevant Courses: Deep learning, Advance Robotics, Reinforcement Learning

SKILLS

- **Programming 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
- **Language:** Arabic (Native), English (B2), Russian (B2)

PROJECTS

- **Home Service Robot** Sep 2023 – May 2024
Bachelor Graduation Project [\[G\]](#)
 - Developed an autonomous robotic system using multi-vision models, language grounding, and a planning algorithm for task execution.
- **Social interactive Robot using Nao Robot via Arabic LLM** Sep 2023 – Dec 2023
RB412 Cognitive Computing [\[G\]](#)
 - 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.
- **Lane Following using Reinforcement Learning (Duckie Town)** Sep 2022 – Dec 2022
IN007 Reinforcement Learning [\[G\]](#)
 - Developed a reinforcement learning model to optimize lane following for autonomous vehicles using the Q-learning algorithm in a Gazebo simulation environment.

VOLUNTEER EXPERIENCE

- **Host System Volunteer** Jun 2021 – Jun 2024
Egyptian Collegiate Programming Contest ECPC Alexandria, EGY
- **Host System Volunteer** Apr 2024 – Apr 2024
International Collegiate Programming Contest ICPC Luxor, EGY
- **System Admin** Sep 2022 – Sep 2022
Egyptian Olympiad Informatics EOI Alexandria, EGY
- **Host Volunteer** Mar 2021 – Mar 2021
Arab Collegiate Programming Contest ACPC Luxor, EGY

COMPETETION EXPERIENCE

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|---|---|
| • RoboCup Junior National @Home Education Division <i>Participated</i> | <i>Feb 2023 – Feb 2023</i> Alexandria, EGY |
| • Egyptian Collegiate Programming Contest ECPC Qualifications <i>Participated</i> | <i>Aug 2022 – Aug 2022</i> Alexandria, EGY |
| • RoboCup International @Home Education Division <i>Participated</i> | <i>Jul 2022 – Jul 2022</i> Bangkok, TH |
| • Egyptian Collegiate Programming Contest ECPC <i>180th</i> | <i>Jun 2021 – Jun 2021</i> Alexandria, EGY |

PUBLICATIONS C=CONFERENCE, J=JOURNAL, S=IN SUBMISSION, T=THESIS, A=ACCEPTED IN PRESS, P=PREPRINT

[P.1] Alrefaie, Mohamed Taher, Fatty Salem, Nour Eldin Morsy, Nada Samir, and Mohamed Medhat Gaber. "The dynamics of meaning through time: Assessment of Large Language Models." arXiv preprint arXiv:2501.05552 (2025).

[A.1] 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).