ABDELRAHMAN ALORDY

Cairo, Egypt | (+20) 10 9392 5619 | abdelrahman.atia@xed.aucegypt.edu | LinkedIn | GitHub | Military Service: Exempted

EDUCATION

B.Sc. in Computers and Artificial Intelligence   *Oct. 2020 – Feb. 2025*
Cairo University   *Giza, Egypt*
- **GPA**: 3.45/4.0
- **Coursework**: Software Foundations, Algorithms, Data Structures, Databases, Programming Languages, Comp. Architecture, Object Oriented Programming (OOP), Artificial Intelligence, Machine Learning.

Visiting Exchange Student   *Aug. 2023 – Dec. 2023*
University of Louisville   *Kentucky, USA*
- **Coursework:** Machine Learning, Cloud Computing, Data Visualization, Embedded Systems.

EXPERIENCE

Deep Learning & Robotics Intern   *Sep. 2024 – Dec. 2024*
Singapore Institute of Manufacturing Technology (SIMTech), A*STAR   *Singapore*
- Collaborated with PhD researchers to optimize a deep learning model for a UR10e robotic grasping system, using PyTorch, OpenCV, and AnyGrasp, applying multimodal learning to integrate visual and kinematic data for improved performance.
- Developed a real-time microservices-based Python application integrating the RealSense camera, grasp detection model, Robotiq gripper, and robotic control via ROS2 and RTDE, improving system efficiency and responsiveness.

Software Engineer Intern   *Jul. 2024 – Aug. 2024*
Meshcheryakov Laboratory of Information Technologies (MLIT), JINR   *Moscow, Russia*
- Fine-tuned an event reconstruction algorithm in C++ for the MPD project, optimizing data flow for particle detection.
- Collaborated with physicists to improve primary vertex detection using machine learning techniques (e.g., Scikit-learn, TensorFlow), achieving a 9% accuracy improvement over existing algorithms.

Software Engineer Intern   *Jul. 2023 – Aug. 2023*
Halliburton   *Cairo, Egypt*
- Developed backend services in Java for report uploads, task management, and tracking well/reservoir status for field engineers, using Spring Boot, Docker, and PostgreSQL for efficient data handling.

Software Engineer Intern   *Jun. 2022 – Jul. 2022*
Egyptian Natural Gas Holding Company (EGAS)   *Cairo, Egypt*
- Contributed to network-related projects by applying network principles and collaborating with IT teams.

PROJECTS

CampusEats *(React Native, Node.js, MySQL)*
- Built a full-stack university dining web app with AI-powered restaurant recommendations based on user preferences, dietary needs, and real-time availability. Designed dual interfaces for students and restaurants to manage orders and menus.

Internet Payment System *(Java, REST API, Tomcat, Postman)*
- Built a payment system supporting various transactions (recharge, internet, landline, discounts, and refunds) using MVC architecture and SOLID principles with Observer, Command, Decorator, and Factory design patterns.

University Library Database Management System *(C#, MS SQL Server, PowerDesigner)*
- Created a DBMS with ERD models and a C# GUI for managing book records, borrowing, and returns in a university library.

Emotion Recognition System *(Python, Pandas, NumPy, TensorFlow, Keras)*
- Developed a CNN-based emotion recognition model using a 35K-image Kaggle dataset, achieving a 6% accuracy improvement (64% to 70%) through a custom preprocessing pipeline (normalization, data augmentation).

TECHNICAL SKILLS

Programming Languages: C++, Java, Python, SQL | Familiar: JavaScript, PHP

Frameworks: Node.js, React Native, Express.js, REST API, Spring Boot, HTML

Machine Learning & Robotics: Scikit-learn, NumPy, Pandas, TensorFlow, OpenCV, ROS2 (Humble), RTDE, MoveIt, Rviz

Databases & DevOps: MS SQL Server, MySQL, PostgreSQL, Docker, Git, Jira, Redhat, Ubuntu 22.04, VS Code

SCHOLARSHIPS AND AWARDS

Singapore International Pre-Graduate Award (Singapore): Prestigious research award at SIMTech, funded by A*STAR.

STudent Advanced Research Training (Russia): Fully funded research internship at MLIT, awarded by JINR.

USAID Scholars Activity (Egypt & USA): Full bachelor's scholarship, including a study abroad semester, funded by USAID.