

# Sarah Shaban Ali

Undergraduate Engineering Student — USAID Scholar  
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## PROFILE

Highly motivated Communication and Computer Engineering student with hands-on experience in embedded systems (Arduino, ROS), full-stack development (React, Flutter), and robotics. Selected as a USAID Scholar for a prestigious exchange semester at the University of Nebraska–Lincoln, USA. Proven leadership through 8+ volunteer roles and engineering internships at Limatrix Inc., Siemens& Eitesal NGO, and national robotics centers. Strong communication, cross-cultural, and technical problem-solving skills, with a passion for innovative, real-world applications.

## EDUCATION

**Mansoura University** Expected June 2026  
*BSc in Communication and Computer Engineering (CGPA 3.96/4.0, Ranked 2nd among my department peers)* Egypt  
*Recipient of the USAID Scholars Program – a fully funded, merit-based scholarship awarded by USAID Egypt*  
**University of Nebraska–Lincoln** Aug 2024 – Dec 2024  
*International Exchange Student, Computer Engineering (CGPA 3.60/4.0, College of Engineering Dean's List)* USA

## INTERNSHIPS

- **Limatrix Inc. – Junior Embedded Systems Intern:** Worked on low-level systems and embedded hardware integration.
- **CodSoft – Python Programming Intern:** Developed 4+ Python automation tools and mini-games, including a quiz app and calculator, reducing manual input by 80% in demo tests.
- **The Sparks Foundation – IoT & Computer Vision:** Developed CV models with IoT applications.
- **Egyptian Aviation and Space Center:** Studied applied aerospace electronics and robotics.
- **SIEMENS and EITESAL NGO:** Studied Automotive & Electronic IP in The Egyptian Embedded and Electronics Center of Excellence.

## PROJECTS

- **Online App Store Website:** Created a full-stack React app with UI/UX design and user interaction.
- **Vending Machine :** Developed a vending machine system using the MSP430 microcontroller, implementing core functionality including item selection, payment handling, and product dispensing.
- **Smart Home:** Developed an automation system using Arduino to manage lights, sensors, and control appliances managing 10+ appliances with motion sensors, achieving 95% energy efficiency in testing.
- **Line Follower, Sumo Robot, RC Robot:** Designed, coded, and built autonomous robots for competition.
- **3D Scanner, Robotic Arm:** Built electronic control systems integrated with sensors and actuators.
- **Python Mini Projects:** Developed games and utilities (e.g., quiz app, to-do list, password generator) to practice algorithms and UI logic.
- **Mobile App UI Designs (Figma):** Calendar App, Coffee Shop App, redesigns of Amazon, Instagram, Netflix.

## RESEARCH EXPERIENCE

- **Research Assistant, Keyboard-Controlled WidowX-200 Robotic Arm:** *with Dr. Hamid Vakilzadian, College of Engineering, School of Electrical & Computer Engineering, University of Nebraska–Lincoln — Fall 2024*  
Researched and Developed a Python-based interface to control a robotic arm using keyboard input, applying ROS and robotics protocols and improved outcomes through real-time system testing.

## TECHNICAL SKILLS

- **Programming Languages:** C/C++, Python, Java, JavaScript, HTML, CSS, SQL, MySQL
- **Frameworks & Libraries:** React, Flutter, UI/UX Design (Figma, Material UI)
- **Tools & Platforms:** Git/GitHub, Arduino, Linux, Microsoft Office
- **Hardware & Systems:** Robotics, Embedded Systems, Electronics
- **Soft Skills:** Leadership, Problem Solving, Public Speaking, Team Collaboration

## LANGUAGES

**Arabic:** Native    **English:** Fluent (Duolingo English Test – Score: 110 (CEFR B2+, close to C1))    **French:** Basic (A2)

## VOLUNTEER EXPERIENCE

### IEEE Student Branch

Jul 2022 – Aug 2023

*Technical Coordinator & PR Volunteer*

*Egypt*

- Coordinated IEEE Victoris 1.0, leading technical logistics and presenting in front of 500+ attendees.
- Awarded *Most Active Volunteer* for exceptional year-round contribution.

### Techno Park Education

Sep 2022 – Nov 2024

*Head of PR & Technical Coordinator*

*Egypt*

- Organized and delivered 5+ robotics workshops, reaching 100+ high school and university students.
- Managed PR campaigns and technical training across education outreach initiatives.

### YUFBF Platform

Nov 2023

*Head of Public Relations*

*Egypt*

- Led strategic communications and event promotions for community engagement.

### Microsoft Student Club – EELU

Sep 2023 – Jun 2024

*PR Committee Manager*

*Egypt*

- Oversaw outreach, branding, and speaker coordination for Microsoft-led tech events.

### USAID Scholar-led Activities

Jul 2023 – Aug 2024

*Vice Head of Public Relations*

*Egypt*

- Facilitated communication and event planning among USAID cohorts and university partners.

### Revive Team

Oct 2022 – May 2023

*Technical Member & PR Volunteer*

*Egypt*

- Supported technical sessions and managed public outreach materials.

### Egyptian Aviation & Space Center

Jan 2021 – Jan 2025

*Head of IT*

*Egypt*

- Led IT infrastructure and digital systems used in aerospace-focused training initiatives.

### Engineering Forum, Mansoura University

Feb 2020

*Event Organizer*

*Egypt*

- Planned and executed logistics for 2 university-wide engineering forums with 1000+ attendees.

### Infinite Loop Team

Jul 2018 – Mar 2020

*Head of Software Circle*

*Egypt*

- Trained 50+ students through 20+ robotics and coding workshops.

### UNL Egyptian Cohort

Aug 2024 – Dec 2024

*Cohort Leader*

*USA*

- Represented Egyptian cohort and facilitated cultural exchange and academic collaboration at UNL.

## COMPETITIONS

- 4th Place – Real Life Competition (International)
- Challenger – NASA Space Apps Cairo, Intel ISEF, Hack 22 (AUC)
- Participant – ICC, Egypt Rally, Sumo Robots

## CERTIFICATIONS & TRAININGS

- Interfacing with the Arduino – University of California, Irvine
- The Arduino Platform and C Programming – University of California, Irvine
- Entrepreneurship Summit – Center for Entrepreneurship and Innovation (CEI) at AUC
- Nanodegree in App Development – Udacity / One Million Arab Coders
- Foundations of Cybersecurity – Google
- Entrepreneurship Course – Center for Entrepreneurship and Innovation (CEI) at AUC
- Nanodegree in Web Development – Udacity / NextCoders (The Egyptian Ministry of Communications and Information Technology)
- 4-Year Leadership Certificate – Aspire
- Career Development and Job Placement Training – AUC Career Center
- Networks and Network Security – Google
- Entrepreneurship course – Nahdet ElMahrousa
- Database Fundamentals – Mahara-Tech from ITI Platform