Ahmed El.Banna
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EDUCATION

Ismailia STEM High School *2020 - 2023*
• Unweighted GPA: 4.0

TOEFL iBT *October 14, 2022*
• Total: 97; R: 27; L: 26; S: 23; W: 21

PROJECTS

An IoT-based System Using Ultrasonic Waves for Measuring the Mediterranean Sea-level Rise and Its Consequences on the North Coast of Egypt.

The project is applied as a simulation for the Mediterranean Sea level rise due to climate change. The relation between change in temperature and level rise was carried out and, consequently, the sea level rise on the Egyptian North Coast is predicted for the next 80 years. The Data was shown on an interactive GUI to increase awareness and take actions to reduce the effect of such change.

Thermoelectric Atmospheric Water Generation Using a Developed Peltier-effect Technique.

The project is a set of Peltier devices designed in a way that can extract water vapor from the air. Due to the clean water crisis, this portable model can be used anywhere and will get enough water for daily personal use. The prototype showed positive results in its effectiveness and water quality and, thus, is considered to be applied in arid areas.

Free HandWriting Recognition by Machine Learning Using Python.

The project was applied by using Python libraries like Pandas and NumPy. The process involved using data analysis, calculating K nearest neighbor and accuracy score. After finishing the training and testing models, we applied a decision tree and support vector machine for the data.

Recycled Eco-Friendly Boiler Ash Brick with a Feedback System to Measure Brick's Dimensions.

The project is a brick manufacturing process and a feedback system that check on the industry. The produced bricks are new type of economical bricks that cause less pollution for the environment. This brick can be constructed in room temperature and can bear stress more efficiently than red building bricks. Then the feedback is an automated system that check for damaged bricks and remove them from the other ones.

ACTIVITIES

• International Youth Math Challenge | July 2021 - Present
Ambassador

- Inspired and helped 30 students in one year to apply for the competition.
- The following year, I mentored 100 students and about half of them reached the semifinals.
- Held 3 sessions for each round (qualifications, semifinals, and finals) in the competition.
- Awarded 2nd place among the most effective Ambassadors in the world for 2022.

• IEEE Suez Canal University | March 2022 - Present
Technical Committee Manager

- Supervised and worked with 30 school and university students in constructing 3 robots.
- Conducted 7 technological events.
- Held 9 sessions with experts in Electrical Engineering Fields.

• **South African Ideas Festival | February - March 2022**
Innovator & Trainee

- Selected among the best 50 projects in Africa.
- Built a business model canvas for my own project that solves water scarcity.
- Discussed difference projects with students and instructors from African Leadership Academy of different cultures and backgrounds.

COMMUNITY SERVICE

• **School Computer Science Club | August 2022 - Present**
Founder & President

- Held 20 web development session for 30 students.
- Published about the 5+ outstanding computer science tracks in a magazine.
- Mentored 5 students in building their own portfolio website.

• **School Physics Club | March 2021 - Present**
Instructor

- Recorded about 15 sessions explaining tough physics concept in our course for other students.
- Conduct a complete-year test bank with model answers for each year.

• **TEDx BeniSuef STEM | November 2021 - Present**
social media Director

- Hold a course for 50 team members about graphic design and content writing.
- Finished 20 social media posts.
- Prepared two events' materials like banners, ID cards, t-shirts, and notebooks.

AWARDS/HONORS

- **International Youth Math Challenge:** Bronze Honor, scoring 12/20 in final round and ranking top 20% of 5200 participants.
- **International Science & Engineering Innovation Competition (ISEIC):** 6th place among 250 other scientific projects.
- **Tatawwar Program:** Semifinalist, among the shortlisted 20 from 6000 students in the Middle East.
- **STEM Schools Admission Test:** Ranked in the top 1% of all test takers & ranked 20th out of +18000 students.
- **Climate Science Olympiad:** Semifinalist, among the top 9% international shortlisted solutions for solving climate change.

LANGUAGES

- **Arabic:** **Native**
- **English:** **C1** (Reading: C1; Listening: C1, Speaking: C1, Writing: B2)
- **French:** **A2** (Reading: B1; Listening: A1, Speaking: A1, Writing: A2)