

# Sadek M. Elsayed

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## EDUCATION

### STEM high school for boys - 6th of October

High school

- Egypt Top Public High School, GPA 4.0 (unweighted); 33 ACT (36 M; 36 S; 31 E; 28 R)

09/2020 – present  
Giza, Egypt

## PROFESSIONAL EXPERIENCE

### STEM Egypt | Hack Club

Member (4 hrs / wk)

- Attended 15+ sessions on python and competitive coding & 5+ seminars on various Computer Science fields

04/2021 – 11/2021

Assistant (2 hrs / wk)

- Organized the workflow of sessions by recording absence, presence, and assignment records.

07/2021 – 11/2021

Competitive Programming Mentor (6 hrs / wk)

- Gave 15 sessions (13 online + 2 offline); recorded; 5 articles; see content [here](#).
- Organized an online CodeForces contest with 5 Participants and wrote 4 original problems.

11/2021 – present

### School's English Club

Leader of Writing Branch (3 hrs / wk)

- Formulated a curriculum of 10 sessions on principles of writing and grammar.
- Administrated the workflow of 10 mentors while tutoring 40+ students in the curriculum with a total of 50+ sessions.
- Closely Instructed a group of 4 mentees and clarified the curriculum to them. Recordings [here](#).

04/2022 – 09/2022

### School's German Club

German Mentor (3 hrs/wk)

- Held 5+ sessions that introduced 20+ students to their German and 5+ that prepared them for the A1 Exam at Goethe Institut Kairo.

10/2021 – 03/2022

### School's Capstone Directors

Capstone Project Assistant (4hrs/wk)

- Helped 60+ students (15+ groups) with their projects.
- Led a mock exhibition for 40+ students (10+ groups).
- Did portfolio & poster weekly revisions - in addition to prototype building supervision.

10/2021 – present

### School's CS club

Algorithms Mentor (3hrs/wk)

- Formulated a curriculum of 5+ sessions on various types of algorithms & data structures.
- Ended up with having 5+ ECPC and IIOT competitions finalists out of 15+ mentees.

04/2022 – present

### Experiment Digital - Youth Leadership & Community Service, The Department of State

Participant

- Gained a certificate of distinguished achievement after attending 8 modules & finishing their assignments.
- Did an individual project that helps Egyptian Community.

06/2021 – 08/2021

Ambassador

Spread knowledge about the program around Egypt.

03/2022 – 05/2022

Peer Mentor

- Supervised 15+ mentees while learning the same 8 community service modules.
- Oversaw discussion & slack chat channels throughout the full program.

06/2022 – 08/2022

### Yale University - Yale Young Global Scholars

Participant (26hrs/wk)

- Attended 5+ lectures on Global Challenges by Yale's professors.
- Participated in 10+ discussions on the lectures' content & various topics.

07/2022 – 07/2022

- Developed a simulation project with a team of 4 international students.

### October Math Circle Competitions (3hrs/wk)

06/2022 – 10/2022

Web Developer ☑

- Worked in a team of 3 members to code a Bootstrap&JS interface for the school's math team official website.
- Participated in preparing a temporary PHP&SQL portal that accepts file uploads from contestants.

### RoundPier Summer Immersion Program

07/2021 – 08/2021

Participant (12hrs/wk)

- Attended 4 weeks of daily sessions on interviews preparation, internships, college admissions, marketing, and others.
- Did a project on water resources with a group of 4 international students.

## PROJECTS

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### Sum of Rows of Pascalized Triangle ☑

06/2022 – 09/2022

Pioneer Academics Program with Oberlin College

- Proved 4 conjectures for Pascalized Triangles & proposed 1
- Put 5 formulas on the sum of rows of Generalized Pascal Triangles.
- Posted 2 entries on the OEIS: [A356692](#) ☑ & [A228074](#) ☑ .

### Investigating the Media Favorability of U.S presidents ☑

12/2021 – 02/2022

Codebozu | Program to teach CS, led by Cornell's CS studentns

- Gathering data from various media websites, the project analyzes them to investigate the media favorability of U.S. presidents.
- I coded the project using various Python libraries in a group of 5 international students & wrote a 3500-word report.
- The project Qualified to the Program's symposium.

### Gentian Blossom

02/2022 – 05/2022

School's Capstone Project

- Built an alternative feedback control system to adjust the production of Gentian Violet, aided by the use of a solar panel.
- Coded a whole Arduino system that utilizes the workflow of a sensor and a pump.
- Presented the project on front of a group of university professors and got a grade of "A+".

## INTERESTS

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**Competitive Programming** ☑ (Ranked pupil on Codeforces) | **Coding Projects** ☑ (Look at my various github repositories.)

## AWARDS

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### Egyptian Olympiad in Informatics (EOI) top 15th percentile.

15/09/2022

- The top individual informatics contest for Egyptian School Students.
- Attained that position after a 2-day offline contest and a 2-day online contest.

### First Place winner at the Nasa Space Apps Giza Location & a Global Nominee

20/09/2021

- Developed an App that gives representative graphs for data about sun from the NASA API.

### 2nd place at the Moonshot Pirates #beapirate challenge out of 65 international teams ☑

01/07/2021

- proposed a smart, accessible solution for the problems of people with deaf-blindness.
- was in a team with other 5 internationals from 4 other countries.

### STEM schools merit based scholarship top 1 percentile out of 18k+ applicants

07/10/2020

- passed a science, math, technology, and IQ test on the national scale.

### Egyptian Collegiate Programming Contest for Teens top 12th percentile out of 175+ teams

26/08/2022

- Passed an online qualification round & two separate offline rounds.
- Worked with a partner to solve problems on various algorithms & data structures.

## LANGUAGES

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English

135 Duolingo

Arabic

Native

German

A1 from school