

# Ahmed Gamal Eltokhy

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## EDUCATION

### The American University in Cairo

Jul. 2020 - Dec. 2024

*Double Major:* B.S. in Computer Engineering and Mathematics, **GPA: 4.0**

*Relevant Courses:* Linear Algebra, Discrete Mathematics, Probability and Statistics, Analysis and Design of Algorithms, Digital Design, Assembly Language, Graph Theory, Modern Algebra

## SKILLS

### Languages & Frameworks

### Software & Tools

**C, C++, Python, HTML, CSS, LaTeX**, Bash, JavaScript, SQL, Scala

Linux, Git, SSH, bootstrap, QT, Matplotlib, Pandas, Numpy, SMTP, Cron, Mechanize, JSON, Fortinet, MikroTik, Sophos, SystemD, Manim

## WORK EXPERIENCE

### The American University in Cairo

New Cairo, Egypt

*Peer Tutor*

Aug. 2021 - May. 2022

- With the coordination of the **SSE in the AUC**, held more than **150** one-on-one tutoring sessions teaching **Calculus I, II, III, Discrete Mathematics, Analysis and Design of Algorithms**, and **Fundamentals of Computing I, II**

### STEM High School for Boys - 6th of October

Giza, Egypt

*IT Coordinator*

Jun. 2017 - Oct. 2019

- Maintained network infrastructure using **Fortinet, MikroTik** and directed the migration for **Sophos** in **17 days**
- Provided live technical support for **450** students and **80** faculty members for **Windows and Linux** personal devices
- Mentored scheduled backups for the used systems with automated testing using **Cron** and **SystemD**

## PROJECTS

### Digital Clock

May. 2022

- Fabricated a functional digital clock using **Verilog** with customized constraints to be run on **FPGA Boards**

### T&J Game: Algorithmic Maze Simulation

May. 2021

- Constructed a maze simulation using **Graph** data structure, **Dijkstra Algorithm** for finding shortest path in an optimal complexity, **Wilson's Algorithm** for maze generation and **QT** for composing the GUI.

### Tokhy's Hub

Jan. 2021

- Created a personal blog with a customized **bash** backend and statically hosted pages by HTML and CSS with the goal of minimizing size (**1.19KB**) and maximizing performance for a fully functional blog

### The Polar Storm

Jun. 2018

- For NASA Space Apps, analyzed a **86 GB** dataset that tracks spatial and temporal changes in Antarctica using **Pandas, Numpy, Matplotlib, Manim**, and created a visualizing website developed using **HTML, CSS, JavaScript, Bootstrap** with UI designed by **Adobe XD** in a **48-hour** competition

## EXTRA-CURRICULAR

### Open Source Community - The American University in Cairo, Founder

Aug. 2021 - Present

- Founded and launched the community with the mission of advocating the **FOSS philosophy**, popularizing open source software and contributions workflow, and keeping up with latest OSS updates.
- Raised **36K EGP** in funds within the first semester of launch

## ACTIVITIES AND ACHIEVEMENTS

- Silver Medal, ranked **5th out of +250 teams**, in Egyptian Collegiate Programming Contest, 2022
- First place in AUC ACM-ICPC competition, 2022
- Qualified to Dell HackTrick Hackathon finals, 2022
- Second place in AUC ACM-ICPC competition, 2021
- PSSF Scholar, attained a **full scholarship** to pursue the bachelor's degree in AUC, 2020