

# Abd El-Twab M. Fakhry

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## EDUCATION

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-  **Faculty of Engineering, Al-Azhar University** Cairo, Egypt  
*Bachelor in Computer Engineering* Sep. 2017 – Jun. 2022


## PROGRAMMING CONTESTS ACTIVITY

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- Solved +1000 algorithmic challenges on different online judges.
- Finalist at *Africa & Arab Collegiate Programming Championship* (2020).
- Finalist twice at *Egyptian Collegiate Programming Contest* (2019, 2020).
- 3rd and 2nd place at *Al-Azhar Collegiate Programming Contest* (2019, 2020).



## EXPERIENCE & VOLUNTEERING

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-  **Al-Azhar ICPC Community** Cairo, Egypt  
*Mentor and Problem-setter* Feb. 2020 – Present
  - **Teaching** Participants Algorithms topics, Data structures and Problem solving paradigms.
  - **Providing Multi-Level Training** during the year.
  - **Writing Problems** for weekly sheets and contests.
  - **Supporting** Participants technically during sessions and online.

## SELECTED PROJECTS

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-  **Queueing ModelSim** Dec. 2020
  - Implemented a software for the calculation of characteristics of different queues having the BMAP (batch Markovian Arrival Process) as an input.
  - Implemented a deterministic queue model using prefix sum technique, helped to know the characteristics of the queue at any point of time.
  - Tools: Python3, Tkinter (GUI Programming).
-  **Anthology of Algorithms and Data structures** Aug. 2020 – Present
  - Implemented an open source library for Common Code for Competitive Programming in C++.
  - Included Graph Theory, Problem Solving Paradigms, Mathematics, Computational Geometry, Game Theory, String Processing, Data Structures, more advanced topics and some helpful tools.
  - Tools: C++, Bash.

## TECHNICAL SKILLS

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- **Programming Languages:** C/C++, Python, Java (SE, FX), SQL, L<sup>A</sup>T<sub>E</sub>X, Bash/Shell.
- **Tools & Technologies:** Linux OS, Git, GNU Debugger, Emacs, Vim, Docker, SQLite.