Abd El-Twab M. Fakhry

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EDUCATION

- 🏛 **Faculty of Engineering, Al-Azhar University**   Cairo, Egypt
  Bachelor in Computers and Systems Engineering   *Sep. 2017 − Jun. 2022*

EXTRA-CURRICULAR ACTIVITIES

- Finalist at Africa & Arab Collegiate Programming Championship (2020). 📇 ✳
- 2x Finalist at Egyption Collegiate Programming Contest (2019, 2020). 📇 ✳
- 3rd & 2nd palce at Al-Azhar Collegiate Programming Contest (2019, 2020). 📇 ✳
- Teaching algorithmic topics, data structures, and problem-solving paradigms to +50 participants. 🔗 🔗
- Providing Multi-level training during the year and writing problems for weekly sheets and contests. 🔗 🔗
- Solved +1000 algorithmic challenges on different online judges. 🔗 🔗

SELECTED PROJECTS

- ☁ **Decentralized Vault** | *Next.js - Hardhat - Ethers.js - Docker*   *Jun. 2022 − Present*
 *Blockchain-based, self-hosted, decentralized, and encrypted cloud storage system.*
  - Implementing upgrade-able smart contracts for storing users' files metadata using the proxy pattern.
  - Developing a single-page application (SPA) using Next.js for static-site rendering (SSR).
  - Using the IPFS p2p network for storing users' files after being encrypted.
  - Using client-side encryption/decryption method for more confidentiality and privacy.

- 🕌 **Next Prayer** | *C++ - Python - Bash/Shell - Roff - Docker*   *Sep. 2021 − Present*
  Islamic prayer reminder for Unix status bars.
  - Implementing an Islamic prayer reminder for Unix status bars using web API.
  - Maintaining an AUR (Arch-user repository) package and a Docker image for non-Unix users.

- 🖥 **Anthology of Algorithms and Data structures** | *C++ - Bash/Shell*   *Aug. 2020 − Present*
  Common code for competitive programming in C++.
  - Implementing an open-source library for common code for competitive programming in C++.
  - Including graph theory, problem-solving paradigms, mathematics, data structures, and some helpful tools.

- 👥 **Queueing ModelSim** | *Python - Tkinter (GUI)*   *Dec. 2020*
  Queueing models simulator.
  - Implemented software for the calculation of characteristics of different queues having the Batch markovian arrival process (BMAP) as an input.
  - Implemented a deterministic queue model using the prefix sum technique, which helped to know the characteristics of the queue at any point in time.

TECHNICAL SKILLS

- **</>** **Programming Languages**

  C/C++ | Java | Python | Solidity | JavaScript | Bash/Shell | SQL | LaTeX | HTML/CSS

- ⚛ **Technologies**

  Next.js | PostgreSQL | Prisma | Hardhat | Ethers.js | Docker

- 🛠 **Tools**

  GNU/Linux | Git | Make | Emacs | Vim | CI/CD