

# Mohamed ELTorky

JUNIOR SOFTWARE ENGINEER AT BAKLY SYSTEMS

+20-1095-0905-10 | contact@torky.dev | torky.dev | MohamedEL-Torky | in MohamedELTorky | ELTorky97

## Education

### Arab Academy for Science, Technology & Maritime Transport

BACHELOR OF SCIENCE IN COMPUTER SCIENCE, GPA: 3.45/4.0

*Egypt, Alexandria*

*Oct. 2015 - Jul. 2019*

## Skills

**Languages** Java, JavaScript, Dart, C, Haskell, SQL, PHP

**Frameworks** Firebase, Flutter, AWS, Docker, ESXi, RPC, RMI, GIT, GitKraken Glo Board

**Markup** HTML, CSS, XML,  $\LaTeX$

## Experience

### Personal

SERVER ADMIN

*Aug. 2014 - Feb. 2015*

- Built a game server on windows server 2008 r2.
- Customized a pre-made data base of a very older version of the game to my liking and ideas using SQL server 2006.
- Connected the database with the game files using ODBC.
- Hosted and edited a website for account registration, log-in, show latest news and automated donation with in-game benefits.
- Managed the network, server stability and maintenance.
- 11k account created and 50 concurrent players served.

### Robotics Workshop

*California Poly technique state  
university, USA*

*2017. Jul - Aug. 2017*

- developed a python program to get the readings from ultra-sonic and GPS sensors using Raspberry Pi.
- Used the readings to direct the drone into a fixed position to it's destination.
- Used the ultra-sonic to change the drone heading direction to evade any obstacles.
- Used the GPS readings again to get the drone back to it's right destination.

### Egypt National Cyber Security CTF 2018

*Cairo, EGYPT*

*24th Mar. 2018*

- Qualified to join Egypt National Cyber Security CTF 2018 out of more than 200 participants.
- Was member of a team contains of 4 participants under name of  $\Sigma$ nigma.
- Placed the 28th out of 37 participant teams.

### 1 Million Arab Coders Competition

*Online*

*2018. Mar - Apr. 2018*

- Studied the Front End Web Development Track.
- Finished the exam and certified for participating and finishing the course.

### 1 Million Arab Coders Competition

*Online*

*2019. Mar - Mar. 2019*

- Studied the Android Development Track.
- Finished the exam and certified for participating and finishing the course.

### Udacity Android Basics Nanodegree

*Online*

*2019. Jul - Sep. 2019*

- Studied the Android Development Track.
- The Nanodegree was paid scholarship from 1 Million Arab coders from excelling in the 2019 March competition.

# Projects

---

## Relevium - Graduation Project

Oct. 2018 - May. 2019

- Built Android mobile application using java.
- Built the application map using Google maps API.
- Used Firebase as the application real-time database for getting users real-time location and for storing their log-in credentials.
- Used Firebase functions to calculate user distance from newly stored alert and on-going alerts and send them push notification based on their location.
- Handled the receiving of push notifications on the mobile application.
- Handled the communications with our smart agent through our API.
- Participated in designing the project UMLs.
- Participated in documenting the project.

## Secure Chat application - College Course Project

Apr. 2019 - Apr 2019

- Built Java chat application between multiple clients using Java RMI.
- Each client created a self-signed certificate that being sent to the first time communicated clients.
- Self-signed certificate are being signed using RSA or ECC.
- Each receiver verify the sender certificate and identity.
- If verification completed successfully the receiver initiates diffie-hellman security protocol to create a session key.
- After the two clients agree on key agreement and the diffie-hellman key is created the two sides uses AES cipher for encrypting and decrypting all the communication between them using diffie-hellman generated key as AES cipher key

## Distributed Chat Application - College Course Project

Dec. 2018 - Jan 2019

- Built Java chat application between multiple clients.
- The clients communicated using peer to peer communication.
- Each client invoked the other clients by Java RMI.
- Tested the Java RMI under several delay factors to insure concurrency and order of the sent messages.
- Cached the messages locally and on server side to be displayed for the next session.
- If a user deleted the cached messages accidentally or data were corrupted, a request will be made to the server to download the last updated cached messages from the previous/current session.
- Replicated the cached message on the server across 4 replicas which 3 of them were updated using round robin technique on the 4 replicas.
- Insured the integrity of the cached messages across the last updated replicas before sending it to the client.
- Initiated a heartbeat method across the primary and secondary servers.
- If the selected primary was down, an election is made using bully algorithm and the winner would inform the client with the new primary to communicate with instead.

## Student | Lecturer Portal - College Course Project

Mar. 2016 - May. 2016

- Built the entire program scenes using JavaFX
- Designed database schema and implemented the design using SQL on MySQL DBMS
- Handling the data integrity and application run time exceptions using java
- Connected the application with the database

## Miwok Mobile application - Online Course Project

Udacity

Dec. 2018 - Feb 2019

- Built the entire application through android course on Udacity.
- Managed the entire project logic using Java.
- Managed the audio requests from android audio manger.
- Added fragments to make the UX smoother and better.