

AYMAN ELAKWAH

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EDUCATION

- Faculty of Engineering, Cairo University
B. S. in **Computer Engineering** (Graduation year: 2021)
Cumulative score: 89%
- Graduated from Udacity Android Developer Nanodegree Course
- Graduated from Udacity Deep Learning Nanodegree Course

COURSEWORK

- Software Engineering
- Object Oriented Programming, Data Structure
- Algorithms
- Image Processing
- Computer Architecture
- Microprocessor Systems (Assembly Language)
- Computer Graphics
- Database Systems
- Circuits & Electronics, VLSI
- Numerical Analysis, Linear algebra, Calculus 1 & 2
- Communications

SKILLS

- Programming languages: C++, Java, Android java, Python, Assembly.
- Familiar with: JavaScript, PHP.
- Good communication skills.
- Have the ability to work under pressure.

EXPERIENCE

- Led a team of 18 having sub-teams (Front-end, Back-end, Android, Testing, DevOps) to develop an application that mimics Twitter.
- Familiar with Linux OS (Ubuntu, Fedora)
- Familiar with basic security vulnerabilities (e.g. Cross Site Scripting, SQL Injection)
- Attended Dell VMware Students Workshop (40 hours)

PROJECTS

- **Elegant Teleprompter (Android App):** It helps people who want to speak fluently in front of cameras. It presents the user with a scrolling text that can be created from mobile or imported from the drive. It is always developed as it has 100,000+ downloads.
<https://play.google.com/store/apps/details?id=com.ayman.elegantteleprompter>
- **Search Engine (Android App):** Search engine interface for text and images. It is built using MVVM architecture. I've also developed the Tomcat endpoints that converted the java backend into a REST API.
- **Popular Movies (Android App):** Connects to TMDb REST API. It lists movies, their rates, reviews and trailers.
- **Baking (Android App):** Gets recipes through an API, displays them in fragments (Compatible with tablets), plays videos, has a widget.
- **Fall Ball (Android Game):** Tilt your device to control a ball trying to fall through obstacles. The game is developed using Libgdx framework.
<https://play.google.com/store/apps/details?id=com.ayman.fallball>
- **Circuit Analyzer (C++):** Application that solves RLC circuits. It takes a netlist file as an input and then calculates the current in each branch and potential difference between nodes.
- **Automated Laser Turret (Android & Arduino):** Android application that detects object position and send it serially to Arduino that controls servo motors having 2 degrees of freedom to shoot laser on the object in 3D space.
<https://www.youtube.com/watch?v=4U9zLkuj-vE>
- **Tanks Game (Assembly):** Multiplayer game written in assembly language and uses serial connection between two computers. (Team project)
- **Photofia (Database project):** Contributed in developing the backend of this web application using PHP Laravel framework.
- **Lighting McQueen (OpenGL):** Simple game of a car that moves forward in a street and collects coins. (Team project)
- **Hill Cipher Image Encryption:** Mathematical research project that discusses how to overcome the disadvantages of the original Hill cipher algorithm. We implemented our algorithm using python and compared the results. (Team project)

AWARDS

- Won the **2nd place** in the 3rd Undergraduate research forum in Cairo University as a team for our research "Hill Cipher Image Encryption". (2018)
- Got listed in Magix Hall of Fame for discovering XSS vulnerability (Jul 2014)
<http://research.magix.com/>