Mahmoud **Tarek**

UNDERGRADUATE SOFTWARE ENGINEER

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Education

Faculty of Engineering, Alexandria University   *Alexandria, Egypt*

COMPUTER AND SYSTEMS ENGINEERING DEPT.   *Sept 2015 - Jun 2020*

- **Commulative GPA**: 3.52/4.0
- **Relevant Coursework**: Introduction to Programming, OOP and Design Patterns, Advanced Data Structures, Probability Theory, Statistics, Systems Programming, Digital Systems, Discrete Mathematics and Numerical Analysis.

Experience

Algorithms Summer Training   *Alexandria University, Egypt*

TRAINEE   *Jul 2017 - Sep 2017*

- Attended a 3 months Competitive-Programming-based training held by ACM Alexandria Student Chapter.
- The training included Couple of famous Data-Structures used in Competitive, Algorithms over Graphs, Dynamic Programming, Bit manipulation, Number Theory, Computational Geometry, String Processing, and Search Techniques .

Main Projects

Timetable Generator   *Aug 2018*

JAVA, JAVAFX   *Individual*

- An automated time table generator in Java with JavaFX application using MVC architecture pattern.
- Developed using genetic algorithms to provide us with a feasible solution in a reasonable time.

SIC/XE Assembler   *May 2018*

C++   *Team of 5*

- Implementation of a SIC/XE two-pass assembler taking an input file and producing object code for the absolute loader.
- Supports using literals and simple expressions.

DBMS with JDBC   *Nov 2017 - Dec 2017*

JAVA, SQL PARSING, XML   *Team of 4*

- A database management system that allows the user to easily save data in tables and manipulate it using SQL commands.
- Integrated with JDBC by implementing JDBC standard interfaces.

Paint   *Oct 2017 - Nov 2017*

JAVA, SWING   *Team of 2*

- A Vector Based Drawing Application. It allows the user to draw different shapes and manipulate them. It has a user-friendly interface.
- Implemented by applying MVC model and different design patterns such as Command design pattern with undo and redo actions.
- Supports dynamic shapes loading using Java Reflection API.

Pets World   *Nov 2016 - Dec 2016*

RUBY ON RAILS, HTML, CSS, BOOTSTRAP, JAVASCRIPT   *Team of 4*

- A social community web application between pet's owners, it supports them with all information they need about their pet life.
- Includes a various features such as Notification system, follow, comment, like system, full profile and email activation system as well as search system.

Skills

Programming Languages	Java, C/C++, Javascript (Familiar), Python (Familiar).
Object Oriented Programming	Very Good knowledge of many OOP concepts and design patterns.
Data Structures and Algorithms	Strong knlowedge of many data structures and algorithms.
Problem Solving	Solved +300 programming problems on different online judges. Participated in various online contests such as Google Hashcode, Facebook Hackercup, and Code Chef SnackDown.
Frameworks and Tools	Web development (HTML, CSS, JS, Ruby on Rails), Android development, SQL and Git VCS.
Others	Presentation skills, Leadership, Team work, and Ability to self-learn.

Activities

ACM Alexandria Student Chapter	Chairman.
AlexU IHub	Organizer.