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# Peter Safwat

Software Engineer

## SUMMARY

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I'm +3 years experience Software Engineer, I start coding when I was 13, programming is more than a job for me it is a hobby. I'm a self-motivated, creative, problem-solver, and determined Engineer. my objective is to contribute more to the open-source community.

## WORK EXPERIENCE

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### Software Engineer

2018-present

*Bee Interactives., Full-time*

- Developing and directing software system validation and testing methods.
- Analyzing data to effectively coordinate the installation of new systems or the modification of existing systems.
- Managing the software development lifecycle.
- Developing and executing project plans.
- Applying mathematics and statistics to problem-solving initiatives.
- Applying best practices and standard operating procedures.

### Backend Developer

2017-2018

*Egyadv., Full-time*

- Main focus on coding and debugging
- Build high-quality reusable code that can be used in the future
- Develop functional and sustainable web applications with clean codes
- Define and communicate technical and design requirements
- Collaborate with Front-end developers

### Programming Instructor

2017-2018

*Pharaonic Technology Systems., Part-time*

- Provide hands-on instruction and practical training in Java, Python, and Arduino.
- Teach courses from beginner level to advance.
- Create instructional materials

## EDUCATION

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### BCS. Faculty of computer and artificial intelligence

2016-2020

*Cairo University*

Major - Computer science  
Minor - Information systems

## SKILLS

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<i>Languages</i>	Arabic (mother tongue) English (professional)
<i>Programming Languages</i>	PYTHON, JAVASCRIPT, C#, C++, PHP, JAVA
<i>Databases</i>	MYSQL, POSTGRESQL, MONGODB, REDIS
<i>Frameworks</i>	LARAVEL, REACTJS, ANGULAR, DJANGO, EXPRESS, RUBY ON RAILS

## PROJECTS

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### World Youth Forum

A System that helped the WYF organizers filter and validate all the candidates for the Forum, with a very large database operation we overcome many performance challenges

### Orange sonetelhaya

A Video Generator, I Worked in this project as a full-stack,

- creating the frontend using react
- in order to preview the video in a short time we used Lottie.js.
- and we recorded the video using node.js, puppeteer, and FFmpeg.
- we used WebSockets to give realtime feedback to the user.

### Bznsbuilder

Worked in frontend

### Dijkstra Visualization

An Interactive Dijkstra Algorithm Visualization tool using react and vis.js. visualize the solution of max flow problem and shortest path

### Picks courier

picks courier is a start-up based in Cairo, Egypt. it offers delivery solutions to individuals, SMEs, and corporates. We own and manage a highly professional courier network through an innovative business model.

### Game Ai

An Ai For a searching game it uses prolog to make a tree of the game states. it also has an interactive UI for setting the initial state of the game and show the solution.

### C Lexical Analyzer

Python Lexical Analyzer for c syntax. it uses the magic of regex to identify the syntax and categorize them.

### Music Player

Web Music Player Using nextjs and Napster Apis.

### KingsMen

An Express.js Cloths shop Web app with MongoDB database

### Vector quantization

Java Implementation for the Vector quantization Compress Algorithm.

### **Fuzzy ToolBox**

Fuzzy Logic Implementation in Python with a graph plotter

### **Adaptive huffman coding**

Java Implementation for Adaptive Huffman Compression Algorithm.

### **smooth curve fitting**

Python genetic algorithm used to fit a curve giving some points and graph them.

### **Knapsack genetic algorithm**

Solving the Knapsack problem using genetic algorithm.

### **Tic tac toe Game**

Reactjs Tic Tac Toe Game

### **Calculating pi by collisions**

A Visualization for calculating the digits of pi using elastic collisions between two objects of different masses and a wall. Let me explain with this diagram.

### **CryptoMail**

Secure nodejs Mail server implemented using blockchain with peer to peer architecture.

## **OPEN SOURCE PACKAGES**

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### **DyForm**

An Open source Laravel package to help create dynamic forms with high-performance insert and retrieve operations.

### **Completeness Checker**

An Open source Laravel package to help track the completeness of an entity, it calculate how many fields the user has filled and it generates a percentage of completeness.

### **Swaggerator**

An Open source Laravel package to help Developers document their APIS With a bunch of easy commands.

### **JoQueryGenerator**

An open-source laravel package to help optimizing data tables query. with the help of the Clovis addon it joins table conditionally.

### **Html Extractor**

Nodejs tool for extracting html ,js ,css files from a giving url

### **Vast Converter**

Converter for converting vast xml files version 1 to vast version 2

## **BOOKS & COURSES**

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*Books*

Clean Code - Robert Cecil Martin

*Courses*

The Nature of Code - Daniel Shiffman  
Head First Design Patterns - Elisabeth Freeman and Kathy Sierra  
CS50's Introduction to Computer Science - Harvard  
Good Parts of JavaScript and the Web - Douglas Crockford  
THE ODIN PROJECT  
Web Development - Udacity

## **PUBLICATION**

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- Laravel dynamic databases - Medium Article

## **LIFE PHILOSOPHY**

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however difficult life may seem, there is always something you can do, and succeed at. It matters that you don't just give up - Stephen Hawking

## **REFERENCES**

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Available upon request