Peter Atef

Software Engineer
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Education

Cairo University **Sep. 2019 – Present**
Bachelor of Computer Engineering, ***GPA: 3.5 of 4*** *Graduation Year: 2024*

Technical Skills

Programming Languages: C++, Python, JavaScript, C, Dart,
Mobile development: Flutter, React-Native.
Data Analysis: NumPy, Pandas, Matplotlib, OpenCV, Scikit-learn
Databases: MySQL.
Others: Microsoft Office, MATLAB, Github, Linux

Relevant Coursework

- OOP
- Data Structures
- Algorithms
- Database
- Probability and Statistics
- Discrete Math
- Image Processing
- Computer Architecture
- Machine Learning
- Operating systems
- Computer Graphics
- Problem-Solving
- Threading
- Agile methodology (Scrum)

Experience

ITI Egypt **08/2022 - 09/2022**
React-Native Summer Training *remote*

- Learning React-Native fundamentals: dealing with mobile UI, Context, Redux
- Building Todo app. **Project Link**
- Building e-commerce system. **Project Link**
- **Certificate Link**

NVIDIA **2022**
Machine learning workshop *remote*

- Learning from real machine learning engineering working at NVIDIA by applying on the supervised learning's pipeline using NVIDIA GPUs.
- NVIDIA DLI Certificate for the successful completion of Fundamentals of Deep Learning. **Certificate Link**

ITI Egypt **09/2022 - 10/2022**
AI Summer Training *remote*

- Learning Linear algebra fundamentals.
- Learning Probability fundamentals.
- Learning Machine-learning fundamentals .
- Learning deep learning basics.
- **Certificate Link**

The National Telecommunication Institute (NIT) **07/2021 - 08/2021**
AI Summer Training *remote*

- Learning data analysis using Python using Numpy, Pandas, and Matplotlib
- Learning how to deal with supervised learning models.
- **Certificate Link**

Projects

Reddit Clone | *Flutter, Dart, Bloc, Agile, Github* ***Project Link***

- Participated in developing the front end of a mobile application for Android using Dart and the Flutter framework.
- We were a team of 25 members containing backend, cross-platform, and DevOps sub-teams.
- Collaborated with team members using version control systems such as Git to organize modifications and assign tasks.
- **My Role**: System Authentication, Searching module, Setting, Unit testing
- Skills: Responsive Mobile app and website - Bloc Design Pattern- Unit Testing - Teamwork.

E-Commerce System | *React-Native, JS, Context, Redux, Axios, Async-Storage, Github, Expo* ***Project Link***

- I built an online Store that gets the product using API and gives you the option to add and remove them to your cart to buy them.

Virtual Calculator | *Image processing, OpenCV, machine learning, Python, Threading* ***Project Link***

- Machine learning project to build a hand-detection project to detect the numbers and the arithmetic operations..
- We used SVM as a machine learning model and we got an accuracy of 90 percent.
- **My Role**: pre-processing "image enhancements", Accuracy Calculations

Color detector | *Pandas, OpenCV, Python.* ***Project Link***

- I built a color detector for videos and images program using OpenCV and Pandas.

Search Engine | *Java, OOP, Data Structures, Threading, MongoDB* ***Project Link***

- Build a Search Engine using mainly three components Crawler, Indexer, and Ranker.
- **My Role**: I worked on the Indexer which is a pre-processing before storing the data in the DB, and I participated in building the website.
- we got first place among all teams in this project because of the high performance of the code and how it manages the resources.

OS scheduler | *C, Linux, Algorithms, Data Structure* ***Project Link***

- Utilized an operating system scheduler and Memory Management that scheduled different processes using the Shortest Remaining Time Next (SRTN), Highest Priority First (HPF), and Round Robin algorithms.
- **My Role**: I was the team leader of this project. I was responsible for building the structure of the project and implementing HPF and RR algorithms.

Hospital management | *C-sharp, SQL, MySQL, Database* ***Project Link***

- Building a Hospital Windows application system.
- System capabilities: Handle multi-users, Handle the privileges of each user, Make appointments for the patient, and Keep track of the patient's medical history.
- **My Role**: I participated in building the DB scheme, I built screens like doctor, nurse, and patient screens.

Logic Simulator | *C++, OOP, Data Structure* ***Project Link***

- Built the application mainly for designing and simulating circuits, as well as saving, copying, cutting, pasting, restoring, undoing, and redoing actions.
- Dealt with several object-oriented programming (OOP) concepts, including polymorphism, inheritance, abstraction, and encapsulation.

Game Engine | *C++, OpenGL, GLSL, CMake* ***Project Link***

- Phase 1: Building a game engine using C++.
- Phase 2: Using the game engine to implement in a real game.
- **My Role**: I participated in building the search engine with my team which was a challenging task for us because we were implementing everything from scratch. Also, I build the lighting system in the game to control the game lights and finally, I participated in designing and implementing the game's main logic.

Projects in Progress

- **Hand Gestures**: machine learning model to detect the numbers constructed with a hand with pre-processing on the image to enhance the accuracy which is the most challenging part because the data set is so noisy. The pre-processing part highlights elimination and thresholding to extract the hand. In the feature extraction part, we use HOG and PCA. We use SVM as our machine learning model. The project isn't finished so You won't find it on my GitHub account.

Honors / Awards

Orange Digital Center (ODC) **summer 2022**

Certificate Link *Project Link*

∗ I got a fourth place over about 50 other students in the Competitive Programming Hackathon by Orange Digital Center in C++.

∗ The competition was on a website called Coding Game on a game called Spider Attack.

Certificates (*Link)*

Flutter Course on Udemy **2022**

72 hour course *Certificate Link*

Python Course on Mahra-Tech **2023**

Online Course *Certificate Link*

Web development basics on Udacity **February 2022**

Certificate Link