Karim M. Elsayad

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Education

Faculty of Engineering – Alexandria University — Alexandria, Egypt
- Computer and Communications Department — Sep. 2018 – Jul. 2022
- GPA: 3.44

Experience:

- **DevOps Training – NAID Internship** — Aug. 2021 – Oct. 2021
  Learned Linux, bash scripting, docker, AWS, Jenkins. Deployed a MEAN app on an AWS EC2 instance. Implemented a CI/CD pipeline.

Skills

- **Languages**: C, C++, Python, Java, PHP, Ruby, HTML5/CSS, JavaScript, bash, Lua, Matlab, SQL
- **Tools and Frameworks**: Git, Jupyter Notebooks, numpy, matplotlib, pandas, pytorch, Tensorflow, Linux, cli, docker, Jenkins, AWS, OpenGL, JavaFX
- **Relevant courses**: Numerical Analysis, Pattern Recognition, Software Engineering, Computer Architecture, Microprocessors, Algorithms, Database Management systems, Operating Systems.
- Good understanding of: Data Structures and Algorithms, OOP
- **Spoken Languages**: Native Arabic, Fluent English, Basic German (A2)

Relevant Projects

Huffman Compression: CLI application to compress files using Huffman algorithm. [C++]

Courses Browser: Display a list a courses stored in multiple tables in a database. Allows as-you-type automatic searching across all fields. Used the Materialize library for styling. Hosted on an AWS EC2 instance. [HTML, CSS, JS, PHP, MySQL, Live]

Todo App: A simple in-browser task manager with full keyboard support for every action. I use this app myself. Used IndexedDB to store data on client side. [[HTML, CSS, JS, Live]

Connect 4: Demonstrating the Minimax adversarial search algorithm, with and without alpha-beta pruning. You can play against the AI. [Python, pygamegui]

Numerical Methods: Two apps, Roots solver, and a linear equations solver [Matlab, code only]

Java Projects: 3 java gui projects demonstrating knowledge and understanding of fundamental OOP concepts such as polymorphism, and design patterns. [Java, JavaFX]

Data structures and Algorithms: Implementing many of them has given me an eye for memory management and understanding pointers, in addition to improving my debugging skills for memory-sensitive apps. [C]

Pattern Recognition: Three machine learning projects: face recognition, image segmentation, and speech emotion recognition. Each folder contains a report, along with data visualizations, about the project. [Python, Jupyter Notebooks, sci-py, Tensorflow, Group work]