



Mousa Abdelmaksoud

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EDUCATION AND TRAINING

M.Sc. Computer Science

Technical University of Munich [Oct 2023 – Jul 2025]

City: München

Country: Germany

Website: tum.de

B.Sc. Computer Engineering

Cairo University [15 Sep 2018 – 15 Jun 2023]

Final grade: 3.75/4.00

Last year's GPA: 3.9/4.00 - Top 10 in class - Received scholarship for academic excellence.

High School (Gen. Sec Certificate)

[Jul 2018]

Final grade: 98.3%

WORK EXPERIENCE

Software Engineering Intern

Siemens [Dec 2023 – Current]

City: Munich

Country: Germany

- Optimized security testing for the cyber security team by automating different tasks using a web-based application.
- Built and maintained the cloud web app using Vuejs/JavaScript and Django/Python.
- Refactored the app and updated Vue2 to Vue3 following best practices and migrations guides.

Co-Founder, CTO

Niowell [1 Mar 2023 – 1 Oct 2023]

City: Remote

Country: Spain

- Maintained a well-being platform using React-Redux/Spring boot. *TypeScript, Micro-services, RestAPIs, Docker, GitLab CI/CD.*
- Built workshops.niowell.com a custom WordPress website to list our wellbeing corporate offerings.
- Led a team of 2 people, one backend and one frontend developer.
- The platform has 100+ well-being professionals.
- Finetuned an AI ChatBot that acts as an assistant to analyze users' emotions and match them with a well-being professional.

Research Student

Siemens [Sep 2022 – Jun 2023]

Country: Egypt

- Automated manual root cause analysis of bug reports, saving an estimated 3.5 hours per report, handling thousands yearly
- Developed a transformer-based technique to efficiently assign multi-labels to bug reports (e.g., performance issue, UI, etc.)
- Built backend with Python/FastApi, Front-end with ReactJS.
- Managed project timelines through bi-weekly presentations for the Siemens Q&A team, outlining project progress and findings.
- Reviewed tens of research papers to formulate an effective architectural approach.

Business Intelligence

Vodafone, Summer Internship [1 Aug 2021 – 25 Sep 2021]

Country: Egypt

- o Saved ~1 hour a day by creating automation for the modeling and data validation process using Selenium, Python, and SQL.
- o Reduced the gap between developers, testers, and product owners by adding feature files to automate and test the program easily using Specflow.
- o Learnt BDD (Behavior Driven Development) in Vodafone workshops.

PROJECTS

Machine Translation: NLP, K-NN, Python

- Implemented translator from English words to French using word embeddings and vector space models.

Link: <https://github.com/MousaMohammad/Machine-Translation-NLP>

Semantic Segmentation using UNET for MSRC dataset

[Dec 2023 – Jan 2024]

Python, TensorBoard, PyTorch.

Link: <https://github.com/MousaMohammad/Semantic-Segmentation-UNET-MSRC-dataset>

Image Processing & Computer Vision: Viola Jones, SIFT, Blending, Python

Built an app to select the best face for each person from multiple group photos then blend them in one perfect photo using face detection then homographic transformation and lastly pyramid blending.

Link: <https://github.com/ahmedehabb/Face-Detection-and-Pyramid-Blending>

Image Processing Labs

In this repository, I have implemented different programs covering the fundamentals of image processing like smoothing filters, contrast enhancement, histogram equalization, edge detection, morphological operations, segmentation, and dealing with textures.

Link: <https://github.com/MousaMohammad/Learning-Image-Processing>

Computer Graphics: OpenGL, C#

Built a simple game engine with OpenGL then used the engine to create a simple game with collision, scores, and game loop. We handled materials, textures, shaders, buffers, and deserialization of the scene from JSON.

Link: <https://github.com/MousaMohammad/OpenGL-Game-Engine>

Software Engineering project: React, JavaScript

- o Created a fully functional website exactly like [Flicker](#) with a team of 18 members.
- o Responsible for the front end of the landing page, log-in, and album pages.
- o Used mock server, made unit testing, and created documentation.

Link: <https://github.com/omarelwakil/SWFrontend>

Search Engine: Java, Spring framework

Developed the main features of a search engine (web crawling, indexing, and ranking).

- o Designed a multithreaded crawler where the user can control the number of threads before starting the crawler.
- o Created the web interface for the search engine with bootstrap and used Spring.

Link: <https://github.com/MousaMohammad/Magnet-Search-Engine>

COMMUNICATION AND INTERPERSONAL SKILLS

Seminar Presenter

Delivered 3 presentations to audiences of ~70 individuals each, covering topics in Software Engineering, AI, and cloud computing.

DIGITAL SKILLS

Python / Git / huggingface transformers / JavaScript / Object-Oriented Programming / Pytorch / C++ / C# / Java / SQL / HTML / JSON / CSS

HONOURS AND AWARDS

Top 10 Excellent Students

Cairo University [1 Oct 2022]