

# Mohammad Helaly

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## EDUCATION

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### M.Sc. in Computer Science

Universität Passau

April 2025 - Present

Passau, Germany

- Focusing mainly on software engineering, with interests in data science and machine learning.

### B.Sc. in Computer and Communications Engineering

Faculty of Engineering, Alexandria University

September 2019 - July 2024

Alexandria, Egypt

- Graduated with a 3.4 GPA.

### IGCSE

AIS - Alexandria International School

Graduated in June 2019

Alexandria, Egypt

## WORK EXPERIENCE

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### Full-Stack Developer

TWENTY Studio

November 2025 – Present

Berlin, Germany

- Developed and maintained full-stack web applications using SvelteKit and Payload CMS.
- Created and contributed to full-stack projects, integrating front-end and back-end technologies.
- Delivered features and milestones on schedule, turning requirements into high-quality implementations.
- Employed software development best practices, ensuring code quality, scalability and maintainability.
- Contributed to all stages of the development lifecycle for several projects, from design to deployment.
- Conducted and coordinated code reviews, testing, CI/CD and other facets of software development.
- Worked in agile teams, engaging in sprint planning and daily stand-ups for iterative development.

### Software Engineer

### Junior Software Engineer

VAES.ai

July 2025 – October 2025

July 2024 – June 2025

Dubai, UAE

- Developed rich front-end, animation-heavy websites using React.js and Next.js.
- Worked on serverless back-ends and database management for several company projects.
- Built software tools and plugins with Python, adhering closely to design patterns and SOLID principles.

### Software Developer

InstaCódigo

January 2024 – June 2024

Dubai, UAE

- Developed cross-platform, user-friendly mobile applications using React Native.
- Built robust, highly scalable web applications using Next.js while employing SEO techniques.
- Utilized Solito to develop both Expo and Next.js apps for web and mobile, all with React Native.

### Navigation System Engineer

Alex Eagles Aero Design

September 2023 – December 2023

Alexandria, Egypt

- Engineered software for fully autonomous drone navigation, enabling self-flying capabilities.
- Designed deep learning models for precise computer vision and autonomous navigation capabilities.
- Developed scripts with the DroneKit API to navigate to waypoints obtained from deep learning models.

### Intern Data Scientist

SLB - Schlumberger

July 2023 – August 2023

Cairo, Egypt

- Cleaned and preprocessed large datasets thoroughly, while conducting exploratory data analysis.
- Developed machine learning models to extract valuable insights from complex datasets.
- Worked on setting up and administering Linux servers and deploying enterprise-scale databases.

## TECHNICAL SKILLS

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### Programming Languages

- Python, C, C++, Java, HTML, CSS, JavaScript, TypeScript, PHP, GoLang, Bash and MATLAB.

### Tools, Technologies and Frameworks

- **Software Development:** React.js, React Native, Next.js, Node.js, Express.js, Svelte.js, SvelteKit, SST, Flask, MongoDB, MySQL, Payload CMS, Socket.io, Java Swing and PySide6.
- **Data Science and Machine Learning:** Pandas, NumPy, Matplotlib, Seaborn, Scikit-Learn, PyTorch, TensorFlow, Keras, Jupyter Notebook and Dataiku DSS.
- **DevOps and Cloud Development:** Git, Docker, Linux Shell and AWS.

## ACHIEVEMENTS

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**Global Winner of the NASA Space Apps Challenge** | [Global Winner](#) | [Lunar Trek](#)  
NASA

*January 2024  
International*

- Won the 2023 NASA Space Apps Challenge globally out of over 8700 teams.
- Awarded the Best Use of Science Award for building Lunar Trek.

**National Competitor in the SITA Ideation Hackathon** | [Helprr](#)  
SITA - Supporting Innovation and Transformation Academy

*December 2023  
Cairo, Egypt*

- Competed nationally in the 2023 SITA Ideation Hackathon.
- Reached the pre-incubation phase and achieved high honors for building Helprr.

## PROJECTS

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**Online Learning Platform** | [GitHub](#) | [Learnly](#)

- Developed an online learning platform for students and instructors to enroll in and create courses, using React.js, Node.js, Express.js, MongoDB and Socket.io.
- Built features such as a course marketplace, live meetings, real-time chatting and a course creator.

**Blindness and Deafness Support App** | [GitHub](#)

- Developed a mobile app designed to support blind and deaf people using React Native.
- Utilized a pre-trained deep learning model for visual object detection in live video feeds from the phone camera and implemented text-to-speech and speech-to-text functionalities.

**Visual Question Answering** | [GitHub](#) | [NeuralVisions](#)

- Developed a web app for answering open-ended questions about images, reaching 68% accuracy and 80% answerability, using Python, Flask and React.js.
- Designed a deep learning model incorporating the OpenAI CLIP encoder, trained on the VizWiz dataset.

**Lunar Seismic Event Visualization** | [GitHub](#) | [Lunar Trek](#)

- Developed web app to visualize lunar seismic events, sourced from NASA's Apollo Seismic Event Catalogue, using React.js and Unreal Engine 5.
- Conducted time series analysis on seismic data and presented visualizations on a 3D model of the moon.

## EXTRA-CURRICULAR ACTIVITIES

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**German Teaching Assistant**  
MIG Academy

*July 2022 – August 2022  
Alexandria, Egypt*

- Prepared lectures and communicated information to students using interactive learning techniques.
- Planned and scheduled course contents and designed placement tests and assessments.
- Assisted in grading assignments and tracking student progress throughout the course.
- Provided feedback on student presentations and learning outcomes.