

Mohammad Helaly

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EDUCATION

M.Sc. in Computer Science <i>Universität Passau</i>	<i>April 2025 - Present</i> <i>Passau, Germany</i>
B.Sc. in Computer and Communications Engineering <i>Faculty of Engineering, Alexandria University</i>	<i>September 2019 - July 2024</i> <i>Alexandria, Egypt</i>
IGCSE <i>AIS - Alexandria International School</i>	<i>Graduated in June 2019</i> <i>Alexandria, Egypt</i>

WORK EXPERIENCE

Full-Stack Developer <i>TWENTY Studio</i>	<i>November 2025 – Present</i> <i>Berlin, Germany</i>
<ul style="list-style-type: none">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 <i>VAES.ai</i>	<i>July 2025 – October 2025</i> <i>July 2024 – June 2025</i> <i>Dubai, UAE</i>
<ul style="list-style-type: none">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 <i>InstaCódigo</i>	<i>January 2024 – June 2024</i> <i>Dubai, UAE</i>
<ul style="list-style-type: none">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 <i>Alex Eagles Aero Design</i>	<i>September 2023 – December 2023</i> <i>Alexandria, Egypt</i>
<ul style="list-style-type: none">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 <i>SLB - Schlumberger</i>	<i>July 2023 – August 2023</i> <i>Cairo, Egypt</i>
<ul style="list-style-type: none">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

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

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

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

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.