

Mohammad Hamdy Oreaba

Computer Science Lecturer / Lab Instructor

Computer scientist with 14 years experience. completed my bachelor degree in Computer Science. Earned my master degree in Computer Science with honours from the American University in Cairo. I have 6 years of teaching experience as a teaching assistant. Courses of interest are programming, software engineering, computer vision and artificial intelligence courses. I have 8 years of experience in the software development industry. Certified Associate in Python Programming and certified AWS Associate Developer. Built complete systems from scratch such as web applications, web services, REST APIs, and AI-powered apps.



Education

2012-08 -
2017-06

Master of Science

American University in Cairo - Egypt

- Major: Computer Science
- Awarded 2 academic honors and 4 fellowships.
- Thesis: Artificial intelligence, Computer Vision
- GPA: 3.75/4.0 Excellent with honor

2004-09 -
2008-08

Bachelor of Science

Higher Technological Institute - Egypt

- Major: Computer Science
- Thesis: Controlling Remote Machines using Simple Object Access Protocol (SOAP)
- GPA: 3.37/4.0

2022-08 -
2022-08

Scientific Degree Equivalencies

Ministry of Education - United Arab Emirates

- Bachelor in Computer Science Equivalency
- Master's in Computer Science Equivalency



Professional Certificates & Licenses

- <https://www.credly.com/users/oreaba>

Cloud Certificates

- AWS Certified Cloud Practitioner (CLF-C01)
- AWS Certified Developer - Associate (DVA-C02)
- Udacity Advanced Cloud Developer (Nanodegree)



Contact

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Programing Skills

Python

Advanced

JAVA | C# | SQL | HTML
| Matlab

Upper intermediate

Python Programming Certificates

- Certified Entry-Level Python Programmer (**PCEP-30-02**)
- Certified Associate in Python Programming (**PCAP-31-03**)

Artificial Intelligence Certificates

- Deep Learning Foundation, Deep Learning institute

Professional Licenses

- Engineer License, Abu Dhabi, UAE



Courses of Interests

- Programming Languages (Python, JAVA, C++)
- Image Processing | Computer Vision
- AI & Machine Learning
- Software Engineering | Software Architecture
- Software Security | Cloud Computing
- Mobile & Pervasive Computing
- Internet of Things | Distributed Systems



Work History

**2022-07 -
Current**

AI/ML Senior Software Engineer Python

34ML Software House, Cairo


- Architected AI solution for ID cards in Python.
- Developed ML-Powered backend APIs to OCR & face match IDs.
- Architected the application services on AWS and deployed the application.

**2021-10 -
2022-04**

Technical Lead & Head of Software Engineering

Syndo FinTech, DFin Holding, Cairo, Egypt

- Architected, designed and developed crowdfunding investment platform from conception through final production phases.
- Developed over 60 data models in a relational cloud database.
- Authored complete system documentation for stakeholders and engineering teams.

C++ | CSS | JAVA Script
| NoSQL

Intermediate



Technical Skills

Django | DRF | CELERY |
BEAT | FastAPI


Upper intermediate

Postgres SQL | ORM

Upper intermediate

GIT | VS Code

Upper intermediate

AWS Cloud | Linux

Upper intermediate

Agile Dev | DevOps


Upper intermediate

Microservice Arch.

Upper intermediate

OAUTH 2.0

Upper intermediate


Docker | Virtual env.

Intermediate

CI/CD/CT

Intermediate



Soft Skills

Patience | Detail
Oriented | Curiosity

Advanced

2018-08 -
2021-10

Senior Software Engineer

American University in Cairo, Egypt

- Architected 100+ RESTful APIs to integrate with various systems like Blackboard and Banner.
- Built systems for mobile applications, library system and Banner.

Accountability | Positivity
| Teamwork

Upper intermediate

2018-03 -
2018-12

Computer Vision Engineer

Valify, Cairo, Egypt

- Trained machine learning models to identify Card ID.
- Built AI powered android mobile application leveraging my recognition model.

2015-07 -
2016-08

CS Research Assistant

American University in Cairo, Egypt

- Enhanced Human Pose Estimation algorithm accuracy by 20% to not fall in common problem called Confusion of Body Sides (CBS).
- Developed SIFT object recognition app.
- Developed search engine by image content using Bag of Visual Words.
- Developed small image processing utilities, such as RGB plane separator.
- Led team of 4 undergraduate through data collection process for 6-month HPE project.
- Balanced project load across my team.

2012-02 -
2015-08

CS Teaching Assistant

American University in Cairo, Egypt

- Taught programming/multithreading Lab Materials in Python and c++.
- Instructed students on how to optimize code and follow S.O.L.I.D principles.
- Assisted professors in courses.
- Graded assignments & exams fairly.
- Used analytical thinking to deliver complex concepts.
- Mentored hundreds of students through office hours and one-on-one communication.
- Inspired many undergraduates to select their desired major.
- Volunteered in Resalah charity club.

2009-01 -
2011-08

CS Teaching Assistant

Higher Technological Institute, Egypt

- Used simple techniques to abstract complex problems.
- Participated in developing and delivering course contents.
- Volunteered in the accreditation committee.
- Suggested adding two CS courses to the program: Compiler Design & Algorithms.
- Led students in Lab sessions.
- Participated in grading & regular student reviews.
- Authored & taught OOP labs in C#.



Projects

AI / Computer Vision Master's Thesis

- <https://fount.aucegypt.edu/etds/1386>

Crowd Funding Platform

- <https://www.syndo.me>

AUC Mobile app

- <https://play.google.com/store/apps/details?id=com.outsystemsenterprise.auc.egypt.AUCMobile>

Security System (Backend)

- Securing APIs using OAUTH 2.0

electronic Know Your Customer (eKYC)

- <https://www.trustyscan.com/docs>
- <https://play.google.com/store/apps/details?id=premiumCard.app>