

# Mohamed Ramzy Ibrahim

Home Page: [AAST Home Page](#)

Researches : [Google Scholar](#), [Research Gate](#)

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## EDUCATION

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- Universitat Autònoma de Barcelona (UAB Spain)** Barcelona  
PhD Student, Computational Models for Artificial Vision, Computer Science, School of Engineering 2021–Present  
– Computer Vision Center (CVC): MultiSpectral Image Analysis and Understanding (MSIAU) Group
- Arab Academy for Science, Technology and Maritime Transport (AASTMT)** Alexandria  
MSc. in Computer Engineering, GPA: 3.96/4.00 (Excellence with Honours) 2018–2020  
– Thesis: “A Hybrid Computer Aided Medical Diagnosis System Integrating Machine Learning and Automatic Region of Interest Segmentation: A Case-Study on Diagnosis of Optical Coherence Tomography Retinal Disorders”
- Arab Academy for Science, Technology and Maritime Transport (AASTMT)** Alexandria  
BSc. in Computer Engineering, GPA: 3.99/4.00 (Excellence with Honours) 2013–2018  
– Thesis: “PIGNUS Security System: Real-time Threat detection using CCTV and Deep Learning Techniques”

## EXPERIENCE

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- Computer Vision Center (CVC) - UAB Spain** Barcelona  
PhD Researcher (Part-Time): MultiSpectral Image Analysis and Understanding (MSIAU) Group 2022-present
- Arab Academy for Science, Technology and Maritime Transport (AASTMT)** Alexandria  
Assistant Lecturer, Computer Engineering Department, College of Engineering and Technology 2021-present
- Arab Academy for Science, Technology and Maritime Transport (AASTMT)** Alexandria  
Teaching Assistant, Computer Engineering Department, College of Engineering and Technology 2018-2020
- Alexandria Electricity Distribution (Summer Training)** Alexandria  
Internship, Software Engineer (C#, SQL Server) July 2017- August 2017
- Egyptian Petrochemical Company (Summer Training)** Alexandria  
Internship, Software Engineer (Java, Oracle) August 2016- August 2016

## RESEARCH INTEREST

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- Computer Vision
- Image Processing
- Machine and Deep Learning
- Data Science and Analytics

## PUBLICATIONS

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1. **Ibrahim, M.R.**, Benavente, R., Ponsa, D., Lumbreras, F. (2024). Unveiling the Influence of Image Super-Resolution on Aerial Scene Classification. In: Vasconcelos, V., Domingues, I., Paredes, S. (eds) Progress in Pattern Recognition, Image Analysis, Computer Vision, and Applications. CIARP 2023. Lecture Notes in Computer Science, vol 14469. Springer, Cham. [https://doi.org/10.1007/978-3-031-49018-7\\_16](https://doi.org/10.1007/978-3-031-49018-7_16)
2. **Ibrahim, M.R.**, Benavente, R., Lumbreras F. and Ponsa D., “3DRRDB: Super Resolution of Multiple Remote Sensing Images using 3D Residual in Residual Dense Blocks,” 2022 IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops (CVPRW), New Orleans, LA, USA, 2022, pp. 322-331, doi: 10.1109/CVPRW56347.2022.00047.
3. **Ibrahim, M.R.**, Youssef, S.M., Fathalla, K.M. Abnormality detection and intelligent severity assessment of human chest computed tomography scans using deep learning: a case study on SARS-COV-2 assessment. J Ambient Intell Human Comput (2021). <https://doi.org/10.1007/s12652-021-03282-x>
4. **Ibrahim, M.R.**, Fathalla, K.M, Youssef, S.M. HyCAD-OCT: A Hybrid Computer-Aided Diagnosis of Retinopathy by Optical Coherence Tomography Integrating Machine Learning and Feature Maps Localization. Appl. Sci. 2020, 10, 4716. <https://doi.org/10.3390/app10144716>

## CONFERENCES & EVENTS

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### **26th Iberoamerican Congress, CIARP 2023, Coimbra, Portugal, November 27–30, 2023,**

participated with

Unveiling the Influence of Image Super-Resolution on Aerial Scene Classification

(Paper + Oral Presentation) doi: 10.1007/978-3-031-49018-7\_16

### **CVC Internal Workshop on the Progress of Research and Development (CVCRD 2023),**

participated with

Aerial Image Super-Resolution: A Glimpse of Everything

(Oral Presentation + Poster)

### **Deep Learning Barcelona Symposium (DLBCN 2022),**

participated with

3DRRDB: Super Resolution of Multiple Remote Sensing Images using 3D Residual in Residual Dense Blocks

(Poster)

### **CVC Internal Workshop on the Progress of Research and Development (CVCRD 2022),**

participated with

3DRRDB: Super Resolution of Multiple Remote Sensing Images using 3D Residual in Residual Dense Blocks

(Oral Presentation + Poster)

### **18th IEEE/CVF Perception Beyond the Visual Spectrum (PBVS22)(CVPRW 2022),**

participated with

3DRRDB: Super Resolution of Multiple Remote Sensing Images using 3D Residual in Residual Dense Blocks

(Paper + Oral Presentation) doi: 10.1109/CVPRW56347.2022.00047

### **IEEE/CVF Computer Vision and Pattern Recognition Conference (CVPR 2022),**

Attendee

### **Amazon Web Services Training Workshop (AWSTW-AAST),**

Attendee

### **Cyber Security Professional Training Workshop (CSPTW-AAST),**

Attendee

### **36th National Radio Science Conference (NRSC 2019),**

participated with

- Poster titled “Human-Robot Interaction for Visual Interpretation Humanoid Robot Application Supporting Special Needs Poster.” (certificate upon request)
- Poster titled “Smart IoT based management System Poster.” [**Best Poster Award**] (certificate upon request)

### **35th National Radio Science Conference (NRSC 2018)**

participated with Poster titled “Mobile Controlled Prosthetic hand Poster.” (certificate upon request)

### **3rd International Research Conference Military Technical College, Cairo, Egypt (IUGRC 2018)**

participated with Poster titled “Mobile Controlled Prosthetic hand Poster.” (certificate upon request)

### **2nd World Youth Forum (November 2018)**

participated in the event held in Sharm El Sheikh, Egypt. (certificate upon request)

## **PROJECTS**

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### **Smart IoT based Waste Management System** (Internet of Things, 2021)

A Smart Internet-of-Thing based waste management paradigm, “EmpTrash”, is deployed to make garbage collection semi-automated to provide clean, healthy, hygienic and green environment in new smart cities. It aims to provide a management system and follow-up services for transporting and recycling waste in a smart, automatic way. Waste containers were designed with an electronic mechanism by adding different sensors to facilitate the monitoring of waste management and recycling processes in an automated manner that ensures a clean environment, adapting the service to the areas’ most in need, and following it up on Google Maps.

### **Smart CCTV Security System** (Computer Vision, 2018)

An AI real-time physical security system for securing a property from different threats by integrating deep learning and computer vision techniques to detect and recognize faces, abandoned packages, car plates, weapons and suspicious behavior from CCTV cameras.

### **Human-Computer Interaction System** (Intelligent systems, 2018)

Human-Robot Interaction System for Visual Interpretation Humanoid Robot Application Supporting Special Needs

### **Mobile Controlled Prosthetic hand** (Intelligent systems, 2017)

Mobile Application used to control a prosthetic hand movement by using Gyroscope sensor in android mobile phone and sending signals to micro-controller to move an artificial prosthetic arm by motor actuation

### **3D Chess Game** (Intelligent Systems, 2017)

Graphical Chess Game with OpenGL that maps the movements to external real Chess board by using arm, Reed sensors and Arduino

### **Bonded: Social Networking Web site** (Website, 2016)

A complete social networking website like Facebook including different page like home page and profile page and support chatting and sharing status

### **Chess Game** (Game, 2016)

A computer chess game using Java, which included Networking and a user-friendly GUI (2 different computers). Handling all cases of defeat, draw and win with Java

### **Airport System** (System, 2016)

booking tickets, Flight arrived, delayed or canceled using Java and MYSQL (GUI)

**Simulation of MIPS processor** (Simulation, 2016)  
simulating single cycle, multi-cycle and pipeline using VHDL.

**Simulation of SicXE Machine** (Simulation, 2016)  
simulating SicXE Assembler and Linker Loader using Java Programming (GUI).

**Mini-Games** (Game, 2015)  
2048 game, Hit the button fast, Paper-Rock-Scissor (multiplayer and vs computer), memory game, tictactoe using C and ASP.Net.

**Restaurant Reservation System** (System, 2015)  
using Microsoft SQL Database, C (Web Application, GUI)

**RFID Radar** (System, 2015)  
detect the cars that exceeds high speeds without camera using Arduino.

**Digital Oscilloscope** (System, 2015)  
low frequency waves implemented using Arduino.

**Calculator** (Data Structures, 2014)  
handling decimal point and all wrong cases.

## TEACHING COURSES & COLLEGE WORK

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- Introduction to Computer (CC111)
- Structured Programming (CC112)
- Programming Applications (CC212)
- Applied Programming (CC213)
- Data Structure & Algorithms (CC215)
- Object Oriented Programming (OOP) (CC316)
- Systems Programming (CC410)
- Multimedia & Virtual Reality (CC447)
- Introduction to Artificial Intelligence (CC511)
- Computing Systems (CC513)
- Data Security (CC518)
- Cyber Security (CC536)
- Web Engineering (CC552)
- Mobile Applications (CC553)
- **Participating in the duties of the National Authority for Quality Assurance and Accreditation of Education (NAQAA) in the College of Engineering & Technology in Arab Academy for Science, Technology and Maritime Transport, Alexandria, Egypt. (AASTMT)**

## SKILLS

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- **Programming Languages:** Python, Matlab, C/C++, Java, C#.
- **Good Knowledge:** Mobile Application (Android Native and Xamarin Cross Platform), Database (MYSQL, SQL Server), Web Development (HTML/React JS/ Bootstrap/ JavaScript/AJAX/ PHP/ Node JS) and Unity Game Engine.

## ATTENDED COURSES

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- **International English Language Testing System [IELTS]**
- **Toefl ITP**
- **International Computer Driving License [ICDL]**
- **Educational Diploma Course**

- **Complete Python Bootcamp Go from zero to hero in Python 3**
- **Machine Learning A-Z Hands-On Python & R In Data Science**
- **Zero to Deep Learning with Python and Keras**
- **Master the Coding Interview Data Structures and Algorithms**
- **Python for Data Science and Machine Learning Bootcamp**
- **Deep Learning Advanced Computer Vision**
- **Deep Learning with PyTorch for Medical Image Analysis**
- **Deep Learning Computer Vision CNN, OpenCV, YOLO, SSD & GANs**
- **The Complete 2019 Web Development Bootcamp**

## LANGUAGES

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- **Language:** Arabic : Native
- **Language:** English : Fluent
- **EXAM IELTS** score(7)

## PERSONAL DETAILS

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- **Nationality:** Egyptian
- **Birthday:** 25 October 1995
- **Hobbies:** Fencing, Tennis, Ping-Pong and Football.