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Education

Sudan University of Science and Technology

B.Sc. in Computer and Information Systems (Honor)
2006 — **First Class**

Sudan University of Science and Technology

M.Sc. in Computer Science
2013 — **First Class**

Sudan University of Science and Technology

PhD in Computer Science
2020 —

Experience

Sudan University of Science and Technology

Assistant Professor

October 2020 - Now

Sudan University of Science and Technology

Lecturer

October 2013 - September 2020

Sudan University of Science and Technology

Teaching Assistant

March 2008 - September 2013

Sudan University of Science and Technology

Head of Department of Scientific Studies at College of Technology.

November 2021 - Now

Sudan University of Science and Technology.

Head of Department of Software Engineering
at College of Computer Science and Information Technology.

September 2018 - May 2019

Sudan University of Science and Technology

Head of Department of Computer Science
at College of Computer Science and Information Technology

January 2014 - January 2016

Taj International Academy, Sudan

Lecturer

2017 - Now

National Ribat University, Sudan

Part Time lecturer

2015 - 2015

Bayan University, Sudan

Part Time lecturer

2014 - 2014

National University, Sudan

2017 - 2017

Publication

Evaluating spatio-temporal features for classification of objective classes.

Merghani, Walied, Adrian Davison, and Moi Yap. "Facial Micro-expressions Grand Challenge 2018: Evaluating spatio-temporal features for classification of objective classes." Automatic Face & Gesture Recognition (FG 2018), 2018 13th IEEE International Conference on. IEEE, 2018.

The implication of spatial temporal changes on facial micro-expression analysis.

Merghani, Walied, Adrian K. Davison, and Moi Hoon Yap. "The implication of spatial temporal changes on facial micro-expression analysis." Multimedia Tools and Applications 78.15 (2019): 21613- 21628.

Objective micro-facial movement detection using facsbased regions and baseline evaluation

Davison, Adrian, Walied Merghani, Cliff Lansley, Choon-Ching Ng, and Moi Hoon Yap. "Objective micro-facial movement detection using facsbased regions and baseline evaluation." Automatic Face & Gesture Recognition (FG 2018), 2018 13th IEEE International Conference on. IEEE, 2018.

Objective classes for micro-facial expression recognition.

Davison, Adrian K., Walied Merghani, and Moi Hoon Yap. "Objective classes for micro-facial expression recognition." Journal of Imaging 4.10 (2018): 119.

Adaptive Mask for Regionbased Facial Micro-Expression Recognition.

Merghani, Walied, and M. Hoon Yap. "Adaptive Mask for Regionbased Facial Micro-Expression Recognition." 2020 15th IEEE International Conference on Automatic Face and Gesture Recognition (FG 2020). IEEE, 2020.

Teaching

Introduction to computer Science (Frequently +5 times)

C++ (Frequently +4 times)

Java programming (Frequently +8 times)

Computer Graphics (Frequently +8 times)

Software Engineering (Frequently+3 times)

Internet Applications (Frequently+3 times)

Digital Systems (Frequently+3 times)

Computer Architecture (Frequently+3 times)

Operating Systems (Frequently+3 times)

Computer Vision (1 Time), For Master Students.

Projects

E-attendance Using Face Recognition (2014)

Associate with Sudan University of Science and Technology (SUST).

The project aims to take attendance by facial recognition to reduce the time spent in the attendance process using computer vision and machine learning techniques.

Equation Solver Using OCR Recognition (2014)

Associate with Sudan University of Science and Technology (SUST).

The project aims to solve pre-written equations after photographing them with a mobile camera.

Augmented Reality Social Network

Associate with Sudan University of Science and Technology (SUST).

The project aims to build a social network by using augmented reality technology, where the post is added in the real environment and then reviewed by others in the place where it was placed. The same technique was used in the educational aspect by adding some questions in specific places and then the student searches for the questions and solves them.

Digital Extinguisher Training System

Associate with Sudan University of Science and Technology (SUST) and Al-Zarqaa engineering Complex.

The project aims to provide firefighting training using virtual reality.

Development of Gun Game Using Unity 3D Platform.

Associate with Sudan University of Science and Technology (SUST) and Al-Zarqaa engineering Complex.

The project is a first person shot(FPS) game using Unity 3D

3D Car Driving Simulator

Associate with Sudan University of Science and Technology (SUST) and Al-Zarqaa engineering Complex.

The project aims to learn how to drive cars and traffic laws in a virtual environment that represents a real environment. The project was implemented using Unity3D.

Intelligence Call Center based on Speech Recognition and NLP

Associate with Sudan University of Science and Technology (SUST).

The project is an automated call center to solve customer problems for telecommunications companies as a model using voice recognition and natural language processing techniques.

Virtual Chemical Lab

Associate with Sudan University of Science and Technology (SUST).

The project aims to create a virtual chemistry laboratory environment for the purpose of teaching students in the absence of real chemistry laboratories and reducing the materials consumed in the educational process.

Traffic Lights Control System Using Computer Vision

Associate with Sudan University of Science and Technology (SUST).

The project aims to use computer vision to control traffic lights based on traffic after identifying the number of cars on each street in order to reduce traffic congestion.

Academic Activities

Results Committee, Sudan University of Science and Technology

Dealing with the results system (data entry and supervision)

Examination Committee, Sudan University of Science and Technology

Supervising the examination process.

Undergraduate Projects Management, Sudan University of Science and Technology.

Managing the process of distributing graduation projects to supervisors and supervising discussions.

External Examiner, University of Garden City, Sudan.

Approval of a new program at the university (Diploma in Information Technology) in a committee affiliated with higher education

External Examiner, The Future University, Sudan.

Approval of a new program at the university (Networking Diploma) in a committee affiliated with higher education

Research expertise

Guest Editor on Special Issue "Imaging Studies for Face and Gesture Analysis" on behalf of Journal of Imaging.

Program Committee on the First Facial Micro-Expressions Grand Challenge (MEGC) in conjunction with FG2018.

Program Committee on the Second Facial Micro-Expressions Grand Challenge (MEGC) in conjunction with FG2019

IEEE Access Guest Reviewer.

Language

Arabic (Native), English

Skills

- University Lecturering
- Research
- Academic Administration
- Computer Vision
- Artificial intelligence

- Machine Learning
- Technical Writing
- Java
- C, C++
- Matlab
- Python
- UML
- Computer Graphics

Achievements & Awards

- . Best National Application Award Issued by Ministry Of Information Technology And Communication- National Information Center , (Aug 2010) Sudan
- . SUST Representative Issued by Scientific Forum For Engineering And Computer Students ,(Feb 2007) Sudan.
- . Participate in AOI Arabic Olympiad in Informatics (July 2005) Syria

Reference

Izzeldin Mohamed Osman - Professor

Sudan University of Science and Technology
izzeldin@acm.org

Moi Hoon Yap - Professor of Image and Vision Computing and the lead of Human-Centred Computing

Manchester Metropolitan University.
m.yap@mmu.ac.uk

Mohamed Elhafiz Mustafa Musa - Associate professor

Jouf university,
College of computer and information sciences.
mazainelabdeen@ju.edu.sa
