

YUSEF S. ELARIAN, PhD

COMPUTER SCIENCE AND ENGINEERING

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CORE QUALIFICATIONS

- BSc, MSc, and PhD in topics related to **Machine Learning** and **Text Recognition and Synthesis**.
- All degrees are assessed by International Qualifications Assessment Service (IQAS), Canada.
- Udacity Certification in **Data Science**.
- First **Award of Excellence in Academic Teaching**.
- Coach of **teaching and learning** techniques and technologies.

TEACHING AND COACHING EXPERIENCE



Teaching and Learning Coach, ESGSA[®], Madinah Technical College 2018-Present

Responsibilities: •Personal Trainer Plans •1-1 Coaching and Observation
•Curriculum Development •Workshops and Trainings.

Coach (Part-time), National Talents, Building Capabilities for “Maker Spaces” (•Arduino, •3D printing and •2D design) in Saudi governmental schools, Jazan **2018**

Assistant Professor, Computer and Network Engineering, Jazan University **2014-2018**

Courses: •Introduction to Communications System •Digital Design
•Microprocessors and Assembly Language •Computer Networks (All courses covered in Theory and Lab) •Graduation Projects (Advisor and Examiner)

Committees: •Department Council •Curriculum Review •M.Sc. Program Development •Graduation Projects •Faculty Interviewing and Hiring •Strategic Plan Revision •Department Research Committee.

Lecturer, Computer Information Systems, King Fahd University of Petroleum and Minerals, KSA **2007-2013**

Courses: •Introduction to Computers •Programming in C •Programming in Fortran

Committees: •ICS Department Publicity •Rector Council for Students Expenditure

Instructor, Arab Open University, Dammam, Saudi Arabia **2013**

Courses: •Data, Information and Computing (M150 A)

Coach (Part-time), Tinkering Studio, for King Abdullah City for Atomic and Renewable Energy, Riyadh **2013**

Facilitator (Part-time), Tinkering Studio, with **Talents** for **ARAMCO**, Dhahran **2012**

Teaching Assistant in the Islamic University of Gaza, Palestine **2003–2004**

Courses: •Data Structures •Computer Architecture •Object Oriented Programming using Java •Logic Design •Introduction to Computers for Engineers.

SELECTED STUDENT PROJECTS



Selected Graduation Projects Samples (mostly using Arduino): •Smart Car using Arduino •Virtual Reality and Body Movement Recognition •Power Saving via Smart Devices •Smart Stick for the Blind •Home Automation using Arduino •Simplex and Duplex LiFi (transmission of data via visible light) •Smart Devices using Raspberry Pi 3 (Model B)

Selected Term Projects Samples: •Smart Irrigation System •Autonomous Robotic Car •Smart Parking •Traffic Light Color Detection via Webcams •Electromagnetic Jammer •Clapping Switch •FM Transmission using Raspberry Pi •Student Attendance Automation with Arduino •Surveying Saudi Communications and Technology Use for Individuals and Corporations •Chladni Plate and Wave Machines •Remote Control Traffic-Light •Car Speeding Detection •and many more.

Projects' YouTube Channel (shortened link): <https://goo.gl/imQ6xv> and/or via scanning the **QR**

ACADEMIC DEGREES (ASSESSED BY IQAS)



King Fahd University of Petroleum and Minerals, KFUPM (World Rank)

2014

Ph. D. in Computer Science and Engineering,
Arabic Handwriting Synthesis
Lecturer-B Scholarship

GPA 4.0/4.0

Dr. Abdelmalek Zidouri



Jordanian University of Science and Technology, JUST

2006

M. Sc. in Computer Engineering,
A Lexicon of Connected Components for Arabic Optical Text Recognition,
DAAD Scholarship

Valedictorian

Dr. F. Idris



Islamic University of Gaza, IUG

2003

B. Sc. in Electrical and Computer Engineering,
Optical Character Recognition
Honor List and Scholarship of Excellence

Valedictorian

Dr. Ibrahim Abuhaibah

SAMPLES OF COURSES AND TRAININGS DELIVERED

Introduction to Arduino	Theory and Practice for trainers	MCT	Brief Introduction to Arduino using BL	Theory and Practice for trainees	MCT	MCT: Madinah College of Technology
Introduction to Communications System	Theory and Lab	JU	Data Structures and Algorithms	Lab	IU	JU: Jazan University
Microprocessors and Assembly Language	Theory and Lab	JU	Computer Architecture	Lab	IU	KFU: King Fahd University of Petroleum and Minerals
Computer Networks	Theory and Lab	JU	Object Oriented Programming	Lab	IU	AU: Arab Open University
Logic Design	Theory and Lab	JU	Digital Logic Design	Lab	IU	IU: Islamic University of Gaza
Introduction to Computers	Theory and Lab	KFU	Introduction to Computers	Theory and Lab	IU	EE: Short courses to KFUPM students including EE club
Programming in C	Lab	KFU	Digital Fundamentals	Short Course	GTC	GTC: Group of Training and Consultation (on-call per hour)
Programming in Fortran	Lab	KFU	Microprocessor Applications	Short Course	GTC	
Introduction to Matlab®	Combined Short Course	EE	Power Transformers	Short Course	GTC	
Data, Information and Computing	Theory and Lab	AU	E-Secretary Skills	Short Course	GTC	

TRAININGS

- Blended Learning Essentials**, Interserve. •NearPod •Kahoot •Quizlet **2019**
- Modern Learning**, Talents, KSA. Tools like •Venlye and Laser Cutter •3 D printing •Arduino **2018**
- Blackboard®**, Deanship of Academic Development, Jazan University, KSA **2018**
- Active Learning Course**, Deanship of Academic Development, Jazan University, KSA **2017**
- Academic Publishing**, Deanship of Academic Development, Jazan University, KSA **2017**
- Jazan University Multi-Platforms distance and mixed learning platform**, Jazan University, KSA **2016**
- Team-Based Learning**, Deanship of Academic Development (DAD), KFUPM, KSA **2014**
- Implementing Social Media into Teaching and Learning**, (DAD), KFUPM, KSA **2012**
- Formal Cooperative Learning - Design, Implementation and Assessment**, DAD, KFUPM, KSA **2012**
- Participatory Classrooms**, DAD, KFUPM, KSA. **2011**
- Good Teaching and Effective Lecturing**, DAD, KFUPM, KSA. **2007**
- Academic Writing**, AMIDEAST, Gaza, Palestine **2004**
- Public Speaking**, AMIDEAST, Gaza, Palestine **2004**
- WebCT and Blackboard Online Teaching System**: IUG, Gaza, Palestine **2003**

SELECTED AWARDS

• Best Projects Awards , Computer and Network Engineering, Jazan University	2015-2018
• First Excellence in Teaching Award in University Level, Jazan University, Jazan, Saudi Arabia	2017
• Imagine Cup Award (Supervised the Second Prize Team), Riyadh, Microsoft®, Saudi Arabia	2017
• First Prize in Aber Presentation Contest, Deanship of Students Affairs, KFUPM, KSA	2012
• 4th Award in the First Saudi Scientific Conference for Higher Education Students , KSA	2010
• Graduate Day Presentation Competition , Deanship of Graduate Studies, KFUPM, Dhahran	2009

PUBLICATIONS

Books:

- **Yousef Elarian (Editor)**, "الحرف العربي والتقنية" (Arabic and Technology), Riyadh, King Abdullah International Center for Arabic Language (KAICAL), 2015.

Patents:

- **Yousef Elarian**, "Systems and Associated Methods for Arabic Handwriting Synthesis Using Synthetic Extension Concatenation and Synthesis", 10,055,659, 21/08/2018.
- **Yousef Elarian**, "Systems and associated methods for Arabic handwriting synthesis and dataset design", US Patent 10,140,262, 27/11/2018.

Patent Applications

- **Yousef Elarian**, "Arabic handwriting synthesis system and method", Application, 10,083,362.
- **Yousef Elarian**, "Method for synthesizing Arabic handwritten text", Application, 10,185,882.

ISI Journal:

- **Yousef Elarian**, Irfan Ahmed, Abdelmalek Zidouri, Wasfi Al-Khatib, Sameh Awaida. LUCIDAH: Ligative and Unligative Characters In a Dataset for Arabic Handwriting (Under Revision)
- **Yousef Elarian**, Irfan Ahmed, Sameh Awaida, Wasfi Al-Khatib and Abdelmalek Zidouri, *An Arabic Handwriting Synthesis System*, Pattern Recognition, DOI: 10.1016/j.patcog.2014.09.013.
- **Yousef Elarian**, Radwan Abdel-Aal, Irfan Ahmed, Tanvir Parvez, & Abdelmalek Zidouri, *Handwriting Synthesis: Classifications and Techniques*, the Inter. J. of Document Analysis & Recognition, DOI: 10.1007/s10032-014-0231-x.
- Adnan Gutub, Lahouari Ghouti, **Yousef Elarian**, Sameh Awaideh and Aleem Alvi, "Utilizing Diacritic Marks for Arabic Text Steganography", Kuwait Journal of Science & Engineering (KJSE), vol.37-1B-June, 2010 (89-110)

International Conferences:

- **Yousef Elarian**, Irfan Ahmad, Abdelmalek Zidouri, Sameh Awaida, and Wasfi Al-Khatib, "Ligatures in the Design of Arabic Handwritten Datasets," in the International Conference of Document Analysis and Recognition. Nancy, 2015.
- **Yousef Elarian**, "سبل تحزيب القرآن الكريم زمنياً" (Arabic), The International Workshop on Computers and Information Sciences (WCIS 2015) URL: <http://www.utfcit.com/wcis/ar/?schedule=day-2-hall-a-lesson-8>, Tabouk, 2015.
- **Yousef Elarian**, Abdelmalek Zidouri, and Wasfi Al-Khatib, "Ground-truth and Metric for the Evaluation of Arabic Handwritten Character Segmentation," in International Conference on Frontiers in Handwriting Recognition (ICFHR), Crete, 2014.
- **Yousef Elarian** and Fayez Idris, "A Lexicon of Connected Components for Arabic Optical Character Recognition", in *International Workshop on Frontiers in Arabic Handwriting Recognition*, Istanbul, 2011.
- **Yousef Elarian**, Husni Al-Muhtaseb and Lahouari Ghouti, *Arabic Handwriting Synthesis*, in *International Workshop on Frontiers in Arabic Handwriting Recognition*, Istanbul, 2011.
- **Yousef Elarian** and Sabri A. Mahmoud, "An Adaptive Line Segmentation Algorithm (ALSA) for Arabic", Inter. Conference on Image Processing, Computer Vision, and Pattern Recognition, pp. 735–9, Las Vegas, 2008.
- Adnan Gutub, **Yousef Elarian**, Sameh Awaideh and Aleem Alvi, "Arabic Text Steganography Using Multiple Diacritics," WoSPA International Workshop on Signal Processing & its Applications, Sharjah, 2008.

Student Conferences (All in the 1st Saudi Higher Education Students Conference, Riyadh, 2010 – Awarded):

- **Yousef Elarian**, “Arabic Handwriting Synthesis”.
- **Yousef Elarian**, “Code Compression: Reference Models on MiBench”.
- **Yousef Elarian**, Sameh Awaida and Sabri Mahmoud, “Design of Datasets for Handwritten Arabic Texts Research”.
- **Yousef Elarian**, “Analysis of Some Arabic Scripting Units in Computational-Linguistic Resources”.
- **Yousef Elarian**, “جهاز توليد الكتابة العربية اليدوية” (Arabic).
- **Yousef Elarian**, “A Lexicon of Connected Components for Arabic Optical Character Recognition”.

Technical Reports:

- **Yousef Elarian**, Aleem Alvi, Adnan Gutub, “Using Multiple Diacritics in Arabic Script for Steganography”, Technical Report, King Fahd University of Petroleum & Minerals, 2008.

Discussion Panels:

- The **Blockchain** for Healthcare Summit, **Speaker**, Dammam, KSA **2018**
- Arabic Language International Day 2017, **Panelist**, Jazan University, Abu Arish, KSA **2017**
- Arabic Language International Day 2015, **Panel Chair**, KAICAL, Jazan, KSA **2015**

VOLUNTEER WORK

- Implementing a “Smart trash bin”, *Ghars* Projects, Patriotism Theme, Salem Bin Mahfouz. **2017**
- Publicity Campaign for the Jazan (IT Themed) Startup Weekend **2016**
- Arabic Language Teaching and Courses Administration **2008 – 2014**

•**LinkedIn ID:** <https://www.linkedin.com/in/yousef-elarian-79776328/>

•**Skype ID:** [Yousef Elarian](#)

REFERENCES

Dr. Abdelmalek Zidouri (Associate Professor)

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King Fahd University of Petroleum and Minerals, KSA.
malek@KFUPM.edu.sa

Dr. Irfan Ahmad (Assistant Professor)

Information and Computer Science Department,
King Fahd University of Petroleum and Minerals, KSA.
irfanics@KFUPM.edu.sa

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