ICOASE2019: 2019 International Conference on Advanced Science and Engineering

Session 01

Session time	Wed, Apr 3 09:00 - 10:20
Location	Duhok- Hall 1
Talk time per paper	20
Chaired by	Adel Eesa (University of Zakho, Iraq)

Paper	Paper details	Was the paper presented?	Was the presenter one of the paper authors?	If either is No, were you aware of this in advance?
1	*EEGs Feature Extraction by Multi-Level DWT with Different Numbers of Principal Components* Eman Khoursheed, Ahmed (University of Zakho, Iraq); Adel Eesa (University of Zakho, Iraq) [1570513369]	yes	yes	
	Printed name and signature of presenter: Eman Ahmed Khoursheed			
2	*Augmented Reality Electric Circuit Experiment* Ahmed Alkurdi (Nawroz University, Iraq) [1570513586]			
	Printed name and signature of presenter: HAWAR BAHZAD AHMAD	yes	NO	
3	*Secure IOT System based on chaos- modified lightweight AES* Jolan Naif (Iraqi Commission for Computers & Informatics, Iraq); Ghassan Abdulhameed (Baghdad University, Iraq); Alaa Farhan (Universtiy of Technology & Higer Eduction, Iraq) [1570516678]	NO	—	
	Printed name and signature of presenter:			
4	*What is Difficult in Learning Programming Language based on Problem-solving Skills?* Abdulmalik Lawan Ahmad (Near East University, Cyprus & Kano University of Science and Technology, Nigeria); Abdo Abdi (Near East University, Cyprus & Duhok Polytechnic University, Iraq); Mohammed Khalid (Near East University, Cyprus); Anas Abuhassan (Near East University, Cyprus) [1570517733]			
	Printed name and signature of presenter: Abdo Sulaiman Abdi			

Comments

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Session 01

Session time	Wednesday, 09:00 until 10:20
Location	Duhok- Hall 1
Talk time	20
Chaired by	Adel Eesa (University of Zakho, Iraq)

Comments

09:00: *EEGs Feature Extraction by Multi-Level DWT with Different Numbers of Principal Components*

Eman Khoursheed, Ahmed (University of Zakho, Iraq); Adel Eesa (University of Zakho, Iraq)

Abstract: An electroencephalogram (EEG) is a measure used to record the electrical activity in the brain by attaching electrodes to the patient's scalp. An Epileptic seizure is a result of anomalous electrical activity in the brain, which is usually detected by EEG signals. In this work, we proposed a feature extraction method using different DWT levels and different numbers of principal components for the classification of seizure and normal EEG signals. First features are extracted from the different DWT levels the results then are used as an input to the PCA in order to reduce their dimension. As a dimensional reduction process, the different number of PCs are tested and evaluated using SVM classifier. The experimental results show that the use of 80-PCs obtains better result when it compared to the other number of PCs which reaches 100% in term accuracy and F-measure. In addition, the classification rates achieved in this research outperform several numbers of existent EEG seizure detection techniques published in the literature.

Comments

09:20: *Augmented Reality Electric Circuit Experiment*

Ahmed Alkurdi (Nawroz University, Iraq)

Abstract: The advancement of hardware technology, specifically in mobiles devices, has provided great computational power for running and creating sophisticated large programs such as, virtual reality, augmented reality and neural network based programs. Augmented reality (AR) is one of the finest and most exciting technologies nowadays. AR enables creating computerized objects and blending them with the real world. Which can be applied to enhance and simplify many aspects in a variety of disciplines. In result, instead of reading text and imagining experimentation it is possible to simulate the experiments through equipment and experiments as same as in real world scenarios, which can be much understandable and comprehensible. In the past decade, several institutions have adopted technological methods of teaching and learning. These instructional technologies can be used by some institutions that cannot provide enough time or proper equipment to students. This is where augmented and virtual reality are mostly favorable. In result, instead of reading text and imagining experimentation it is possible to simulate the experiments through equipment and experiments as same as in real world scenarios, which can be much understandable and comprehensible. In this paper, a model of an electric circuit is created to simulate the motion of electrons and how electric current runs through a wire and provides power for different tools. The creation of such a model involves design, modeling, simulation and animation of the model. This is done by relying on several software and frameworks such as Maya3D, Unity3D, ARKit, etc..

Bio for Ahmed Alkurdi: Lecturer At Nawroz University, Mobile Application Development Specialist

Comments

09:40: *Secure IOT System based on chaos- modified lightweight AES*

Jolan Naif (Iraqi Commission for Computers & Informatics, Iraq); Ghassan Abdulhameed (Baghdad University, Iraq); Alaa Farhan (Universtiy of Technology & Higer Eduction, Iraq)

Abstract: The increasing The Internet of Things objects and entities in the famous applications causes a needing to provide an unique and secure identifiers with ability to protected data transferring through the network. Secure IoT communication becomes more urgent issue for important IOT entities that content computing-devices and embedded-sensor subsystems used in unofficial industrial machine to machine (M2M) communications, smart energy-grids, home or buildings and other computing devices. In this paper we proposed a secure system by using chaotic system combinate with the modified lightweight AES. The 5-D chaos system (hybrid from logistic and Lorenz chaotic system) was used to generate the sequences chaos keys used in the lightweight AES and SHAKE128. The Lightweight AES was modified to reduce the processing complexity of AES with decreased the processing time (have 145% speed more). The output of modified lightweight AES encryption System has the good statistical tests near to original AES that can avoid many attacks.

Comments

10:00: *What is Difficult in Learning Programming Language based on Problem-solving Skills?*

Abdulmalik Lawan Ahmad (Near East University, Cyprus & Kano University of Science and Technology, Nigeria); Abdo Abdi (Near East University, Cyprus & Duhok Polytechnic University, Iraq); Mohammed Khalid (Near East University, Cyprus); Anas Abuhassan (Near East University, Cyprus)

Abstract: Problem-solving skills are paramount to university students while learning programming languages. Many researchers have identified a lack of problem-solving skills among university students across various disciplines, but little is known on how certain subjects could ease the acquisition of these skills and vice versa. Educational researchers should focus on exploring the role problem-solving skills could play in preparing students toward standard approaches to learning programming languages. This paper provides an understanding of the difficulties faced by university students while learning programming language using problem-solving skills. The questionnaire used in the study has 32 items categorized into four dimensions of Analysis, Design, Coding and Testing. Data were collected randomly from 113 voluntary participants from Information Technology and Engineering Departments of Near East University, Cyprus. Statistical analysis applied to the data revealed a significant correlation between all the dimensions and existence of a level of difficulties above average on all the dimensions. This research will augment related literary findings and help academicians situate the best practices in teaching problem-solving skills as well as a programming language.

Comments

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Attendance Sheet/
Hall No. 1 from : 9:00 - 10:
April, -2019

- **Name of the Researcher (s)/ Presenter (s):**.....

- **Title of the Presenting Research/ Paper:**

- .....

- .....

- .....

- .....

- **Time:** 9:00 — 10:20 Seaßion (1) 3/4/2019

- **Avenue: DPU- Technical Institute of Duhok- Azadi Hall- Seminar Hall No.** 1

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1	عصام احمد حامد Esam Ahmed Hamed	Control	DTCE/EE	esam07@gmail.com 07503676392	
2	عبدالسلام محمد جرجيس Abdulsalam Mohammed Jarjees	هندسة حاسبات Computer Engineering	DPU/BTI ب. تكنيكي ده ره ش شمه بردوش التقني	07507399882 Salam_mja62@yahoo.com Abdulsalam.mohammed@dpu.edu.org	
3	جيمان خورشيد Jeeman Khorshed	Msc. in Computer ~~Electrical~~ Engineering هندسة حاسبات	ECE/College of Engineering Duhok University	07514705490 jeeman.khorshed@uod.ac	
4	م.د. آمال غازي حمد رفش L.Dr. Amaal Ghazi Hamed Rafash	علوم حاسوب Computer Science	Al Mamoun University College كلية المأمون الجامعة	amaal_ghazi@yahoo.com 07801607852	
5	م. زينب شوقي حميد Zainab Shawqi hamed	communication engineering	DTCE/EE	07503170059 Zainab.Shawqi@dpu.edu.krd Zainabshawqi@gmail.com	
6	م.م. إيناس محمد حسين الكاف Enas Mahemed Heusen	computer science	الجامعة المستنصرية / كلية التربية / علوم حاسبات	07707245580 enas.seead38@yahoo.com	
7	Mohammed A.M.salad محمد عبدالرزاق محمد صالح	computer science	رئاسة جامعة	07504821927 mohammed.salad@dpu.edu.krd	

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8	Nermeen Smad Sadq	إدارة الاعمال	معهد دهوك		
9	Sundos Muhammad Ali	علوم حاسبات	Nawroz university	Sundos zebary3el@gmail.com	
10	Eman Ahmed Khourshed	Computer science	university of zakho	emanak2004@gmail.com	
11	Enas Mohemmed Hussein Sead	=	~~University~~ AL-Mustansiry university	enas.seead38@yahoo.com	
12	Dr. Alaa Hussein Ali	Electrical Engineering	University of Technology	140007@uotenology.edu.iq alaa_eng1970@yahoo.com	
13	Zryan Najat rashid	Computer Science	Sulaimani polytechnic University	Zryan.rashid@spu.edu.iq 07701596200	
14	Shereen Saleem Sadiq	computer Science	Duhok polytechnic university	shireen.saleem@dpu.edu.krd	

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15	د. اميرة بيبو سلو Amira Bibo Sallow	Computer science / Operating Sys.	Nawroz University	amo_bibo@yahoo.com 07503637499	
16	Dr. Qussay Salim Tawfeeq د. قصي سالم توفيق	communication	University of Technology	30007@uotechnology-edu.iq 07707603879	Qussay
17	Ghadeer H. Eskander	Electronic & Comm.	Babylon University	ghadeermancy@yahoo.com 07728740846	
18	د.م. سنان ماجد عيسى Dr. Sinan M. Elias	Electrical & Electronic Engi.	University of Technology	sinansma@yahoo.com 07703912813	Sin
19	د. جبار خلف محمد Dr. Jabbar Khalaf Mohammed	Communication Engineering Departement	" "	drjab68@gmail.com	
20	د. عبد العزيز علي عيسى Dr. Abdulazeez Ali	Electronics & Comm. Eng.	Tisk Int. Univ. (TIU)	abdulazeez.ali@tishik.edu.iq 07507217385	
21	د. علي عامر أحمد Dr. ALi Amer Ahmed	Control System Engineering	MOST Ministry of science & technology Iraq training center	ali_alrawi2005@yahoo.com 07802825349	

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22	ازهر تحسين حميد Azher Tahseen Hamid	Electrical & Electronic Engineer	Zain Telecom	azher.Tahseen@iq.zain.com 07901901889	
23	عمر مزاحم ملالله Omar Mozahim Malallah	computer Engineer	U O Z	omar.malallah@uoz.edu.krd 07503549792	
24	حسام كريم فرحان Husam Kareem Farhan	Computer Engineer	Ministry of Education / Iraq	Husam.kar@gmail.com	
25	Dawlat Mustafa Sulaiman	Computer Science	Duhok Polytechnic University	dawlat.mustafa@dpu.edu.krd	
27	Omer Mohammed Salih	computer Engineer	Duhok polytechnic university	omar.mhamed@dpu.edu.krd	
28	Adel Sabry Essa	computer Science	University of Zakho	adelsabryissa@gmail.com	
29	Ramadhan J. Mstafa	computer Science	University of Zakho	ramadhan.mstafa@uoz.edu.krd	

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37					
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30	كارزان عوني عبدالجبار Karzan Awni Abduljabar	plant production	Duhok Polytechnic Uni.	Karzan.awni82@gmail.com 0750 4511068	
31					
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ICOASE2019: 2019 International Conference on Advanced Science and Engineering

Session 05

Session time	Wed, Apr 3 11:00 - 12:20
Location	Duhok- Hall 1
Chaired by	Idrees Sarhan Hussein (Duhok Polytechnic University, Iraq)

	Paper	Paper details	Was the paper presented?	Was the presenter one of the paper authors?	If either is No, were you aware of this in advance?
✓	1	*Optic Disc Detection and Segmentation in Retinal Fundus Image* Hawkar Shaikha (zakho university, Iraq); Amira Bibo (Nawroz University, Iraq) [1570518262]	Yes	Yes	Yes
		Printed name and signature of presenter: hawkar Khoder Shaikha			
	2	*Green Cloud Framework For Reducing Carbon Dioxide Emissions in Cloud Infrastructure* Mustafa Ibrahim Khaleel (University of Sulaimani, Iraq); Awder Ahmed (Suliamani Polytechnic University, Iraq) [1570518967]			
		Printed name and signature of presenter: Mohammed E. Safi			
✓	3	*Effect of Wavelet Decomposition on Database Size Reduction for Face Recognition Rate* Eyad I. Abbas (University of Technology & Ministry of Higher Education, Iraq); Mohammed Ehsan Safi (UOT, Iraq) [1570520128]	Yes	Yes	Yes
		Printed name and signature of presenter: Mohammed E. Safi			
	4	*Smart Home Management System Based on Face Recognition Index in Real-time* Shakir Fattah Kak (Duhok Polytechnic University, Iraq); Firas Mahmood Mustafa (Nawroz University & Engineering College, Iraq); Riyadh Qashi (Leipzig University of Applied Science, Germany) [1570522156]	Yes	Yes	Yes
		Printed name and signature of presenter: Dr. F. Dr. Firas Alfiky			

Comments

ICOASE2019: 2019 International Conference on Advanced Science and Engineering

Session 05

Session time	Wednesday, 11:00 until 12:20
Location	Duhok- Hall 1
Chaired by	Idrees Sarhan Hussein (Duhok Polytechnic University, Iraq)

Comments

11:00: *Optic Disc Detection and Segmentation in Retinal Fundus Image*

Hawkar Shaikha (zakho university, Iraq); Amira Bibo (Nawroz University, Iraq)

Abstract: Segmentation of Optic Disc (OD) is one of the significant steps in automatic Diabetic Retinopathy (DR) detecting. Thus, DR detecting needs to eliminate the OD pixels. In this paper, a new technique is presented for OD segmentation that depends on the histogram template matching algorithm and OD size. The template matching algorithm is used for finding the center of the OD. In this step, the histogram of each RGB (Red, Green, and Blue) planes is found and then the cross-correlation is found between the template and the original image, OD location is the point with maximum cross-correlation between them. The OD size varies according to the camera field of sight and the resolution of the original image. The rectangle size of OD is not the same for various databases, the estimated size for the DRIVE, STARE, DIARTDB0, and DIARTDB1 are 80×80, 140×140, 190×190, and 190×190 respectively. After finding the OD center and rectangle size of OD, a binary mask is created with Region of Interest (ROI) for segmenting the OD. The DIARTDB0, DIARTDB1 and DRIVE are used to evaluate the proposed technique, the result was robust and vital with an accuracy of 96%, 98% and 98% respectively.

Comments

11:20: *Green Cloud Framework For Reducing Carbon Dioxide Emissions in Cloud Infrastructure*

Mustafa Ibrahim Khaleel (University of Sulaimani, Iraq); Awder Ahmed (Suliamani Polytechnic University, Iraq)

Abstract: The increasing deployment of datacenters and cloud resources around the globe escalated by higher electricity prices advanced energy cost, cooling and communication cost, and carbon dioxide consumption. To curb such ever-increasing problem complexity, we have formulated a scientific workflow-based cost-effective paradigm based on rigorous mathematical model. Multiple techniques have been considered to increase system utilization rate within acceptable performance bounds. First, we have applied Dynamic Voltage and Frequency Scaling (DVFS) approach to scale down the power consumption by cloud servers via calculating the best near-optimal frequency. Then, we have reused cloud-based VMs to execute as many scientific workflows as possible using fewer cloud servers which conserves a tremendous amount of energy cost including carbon dioxide emission consumption and electricity cost. This has been done through eliminating the overhead of sharing multiple VMs the same server's capacity. Moreover, the aforementioned objectives have been achieved without degrading the Quality of Service (QoS) specified in Service Level Agreement (SLA). However, we have simulated our heuristic using open source CloudSim and compared with algorithms such as the Rank and EARES-D. The results have showed that our paradigm model is better than other heuristics with an average energy reduction of 70%.

Comments

11:40: *Effect of Wavelet Decomposition on Database Size Reduction for Face Recognition Rate*

Eyad I. Abbas (University of Technology & Ministry of Higher Education, Iraq); Mohammed Ehsan Safi (UOT, Iraq)

Abstract: This paper presents the effect of the discrete wavelet decomposition on the database reduction, which is used in biometric face recognition. The Olivetti and Oracle Research Laboratory is own face databases for training and testing. The first level wavelet decomposition was applied to the training and testing faces made the size of database decreasing by 75% out of original size. Both databases are treated by principal component analysis algorithm to get the effect of that on face recognition rate. Principal component analysis algorithm is biometric face recognition. The experiment results appeared the reduction in face recognition rate between original and reduced database is 2%. This approach is more efficient for reduced the database, and computational load with a maintaining an acceptable proportion of recognition rate.

Comments

12:00: *Smart Home Management System Based on Face Recognition Index in Real-time*

Shakir Fattah Kak (Duhok Polytechnic University, Iraq); Firas Mahmood Mustafa (Nawroz University & Engineering College, Iraq); Riyadh Qashi (Leipzig University of Applied Science, Germany)

Abstract: The present study aims to use the smart home application practically to enhancing control management of the home, security, increase comfortably, and decrease energy consumption using biometric technique and cloud services. At the first stage, the proposed system works to identify member identification by using the face recognition method as a tool to enhance the home security, and home control management. The recognition procedure captures a member face image in a controlled environment by using a digital camera as a test image. The AdaBoost technique is utilized to detect and extract a member's faces for the train, and test member images. DWT with PCA methods have used to extract image features and dimension reduction. At the classified procedure, Euclidean distance method has been used for the matching process to verify home member's identification index. As well as, a special MATLAB procedure has been used to transmit the member's index to the cloud server. The cloud server analyses the received member identification in order to retrieve the verified member's profile, which contains specified appliances for each individual member. The home appliances are controlled by the highest priority member who has been registered in real time at home by the recognition stage. Then, the cloud server transmits a home member's privilege to the microcontroller through a Wi-Fi network submitting the required actions. The designed proposed smart home system provides a secure, energy reduced, and cost- effective design that automatically responds to the home member's needs.

Bio for Shakir Fattah Kak: Shakir was born 1 September 1974 in Mosul, Iraq. He received his BSc degree, from the University of Mosul-Iraq, College of Education, Computer Dept. at 1997, Higher Diploma degree, from the University of Duhok-Iraq, College of Education, Computer Dept. at 2009 and MSc degree, from the University of Zakho-Iraq, College of Science, Computer Dept. at 2013. He is PhD student at DPU. Experience with IT projects, IoT, Biometric, Smart Home, Image Processing, Digital Signal Processing and computer networks. He has served in computer science department in DPU, since 2001. He has given a series of courses on different topics within the computer science specialization for BSc students, since 2001.

Comments

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Attendance Sheet/
Hall No. 1 from : 9:00 - 10:
April, -2019

- **Name of the Researcher (s)/ Presenter (s):**.....

- **Title of the Presenting Research/ Paper:**

- .....

- .....

- .....

- .....

- **Time:** 11 — 12:20 seaption 2 8/4/2019

- **Avenue: DPU- Technical Institute of Duhok- Azadi Hall- Seminar Hall No.** 1

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1	Tariq salih طارق صالح	Forest biometry	college of agric. Univ. Duhok	tariq.k-salih@hotmail.se	
2	م.د. آمال غازي حمد L.Dr. Amaal Ghazi Hamad	Computer Science علوم الحاسوب	Al Mamoun University College كلية المأمون الجامعة	amaal_ghazi@yahoo.com 07801607852	
3	Anaam Ghazi Hamad انعام غازي حمد	Msc Geomatic engineering/Building & Constration department University of Technology		annamghazi@gmail.com 07718139377	
4	Dr. Asst. prof Enas Mohemed Hueiseen Saeed ايناس محمد حسين سعيد	computer science	AL-Mustansiry University	enas.saeed38@yahoo 07707242585	
5	Zeinab Shawqi hameed زينب شوقي حميد	هندسة اتصالات Communication	ETC/EE	Zeinabshawqi@gmail.com 07503170059	
6	Eman Ahmed khoursheed ايمان احمد خورشيد	علوم حاسبات computer science	university of Zakho	emanakzou4@gmail.com 0750413 4054	
7	Abdulsalam Mohammed Tarjees عبدالسلام محمد جرجيس	هندسة تقنية حاسبات Comp. Tech. Eng	DPU/BTI المعهد التقني في دهوك	07507399882 Salam_mja62@yahoo.com	

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8	عصام احمد حامد Esam Ahmed Hamed	Control & Systems	D.TCE/EE	esam07@gmail.com 07503676392	
9	Zryan Najat rashid زريان نجاة رشيد	Computer Science	Sulaimani polytechnic University	Zryan.rashid@spu.edu.iq 0770 159 6200	
10	Rezhan Star Omar ڕێژەن ستار عمر	Computer Science	Sulaimani Polytechnic University	rezhan.Jeja@gmail.com	
11	Ghadeer H. Eskander	Electronic and comun.	Babylon University	ghadeerMency@yahoo.com./07728790846	
12	Hazhir Karimi	GIS	university of Zakh	hazhir.karimi25@gmail.com	
13	Ramadhan J. Mstafa	computer science	University of zakho	ramadhan.mstafa@uoz.edu.krd	
14	Jeeman Ahmed Khorsheed	Computer Engineering	UOD	jeeman.khorsheed@uod.ac	

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15	علاء حسين علي Alaa Hussein Ali	Electrical Engineering	University of Technology.	140007@uotechnology.edu.iq alaa_eng1970@yahoo.com	
16	Dr. Qussay Salim Taufeeq	communication	University of Technology	30007@uotechnology.edu.iq 07707603879	Qussay
17	Dr. Salih T. Wali	Ecophysiology	university of Duhok. College of Agriculture	stwali@uod.ac 07504591184	
18	Assist. Prof Dr. Abbas A. Issa ا.م.د. عباس حسين عيسى	Control & Automation Eng.	University of Technology. Electrical Eng.	30050@uotechnology.edu.iq 07703961974	
19	ب.د. خيري محمد عبدالله	Nuclear Engineering	UOD College of Engineering	khair.abdullah@uod.ac 07504581041	
20	Dr. Firas Mahmood	E&comm eng Phd	Nawroz University	firas.mustafa@ieee.org 07501437687	
21	أزهر تحسين حميد Azhar Tahseen Hamid	Electric & Electronic Engineer	Zain Telecom	azhar.tahseen@iq.zain.com 07901901889	

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22	عدنان محمد عبدالله Adnan M. Abdullah	Animal hygiene	Agriculture College, Univ. Duhok	adnanrekani@uod.ac 07504953588	
23	د. علي عامر أحمد Dr. Ali Amer Ahmed	control system Eng.	MOST Ministry of Sci & Technology	ali_alrawi2003@yahoo.com 07802825549	
24	د. عادل صبري عيسى Adel Sabry Eesa	computer Science	Zakho University	adelsabryissa@gmail.com ٠٧٥٠١٨٨٠٢٦٤	
25	د. عزالدين حسو	Electrical Eng.	DPU	ezideen.hassoal dpu.edu.krd	
27	د. هاوكار خضر شيخه Hawkar Khedar Shaikha	ICT	University of Salahaddin college of science	haockar@gmail.com ٠٧٥٠٧١١١٥٨٥	
28	د. عبدالعزيز علي علي Dr. Abdulazeez Ali	Electronics and Comm. Eng.	TISK International University (TIU)	abdulazeez.ali@ishik.edu.iq 07507217385	
29	Dr. Shafilea Sultan Abdullah	Civil Eng.	DPU - TCE	Shafilea.Sultan@dpu.edu.krd	

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30	Eyad I. Abbas د. اياد ابراهيم عباس	Electronic Engineering	university of Technology	30013@uotechnology.edu.iq	Eyad
31	Omer mohammed salih	computer Engineer	Duhok polytechnic University	omar.mhamed@dpu.edu.krd	
32	Dr. Idreas Kocher	Security for IoT	Technical College of Eng.	idreas.hussein@dpu.edu.krd 07504399913	
33	Lec. Mohammed E. Safi	Electrical Eng.	University of Technology	30165@uotechnology.edu.iq	
34	shaymaa AL-hayali	Computer technical engineering	Mosul Univ	shymaa_alhyali@uomosul.edu.iq	
35	Zena. E Dallalbashi	Computer engineer	Northin Technology	zena70.ez@gmail.com	
36	Ahmed Fehr Fathi احمد فهر فاتح	computer Science	mosul Uni.	AhmedFehr@uomosul.edu.iq	

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37	د. رياض زخلول محمود Dr. Riyadh Z. Mahmood	Computer Sciences	University of Mosul	riyadh_1970@yahoo.com 07738502645	
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ICOASE2019: 2019 International Conference on Advanced Science and Engineering

Session 09

Session time	Wed, Apr 3 15:00 - 16:20
Location	Duhok- Hall 1
Chaired by	~~Masoud Muhammed Hassan (University of Zakho, Iraq)~~ Maiwan Bahjt Abdul Razzaq

Paper	Paper details	Was the paper presented?	Was the presenter one of the paper authors?	If either is No, were you aware of this in advance?
1	*Optimized FPGA Implementation of the CRC Using Parallel Pipelining Architecture* Noor Qaqos (Duhok Polytechnic University & Shekhan Technical Institute, Iraq) [1570522979]			
	Printed name and signature of presenter: Noor Qaqos	Yes	Yes	
2	*Different Model for Hand Gesture Recognition with a Novel Line Feature Extraction* Mayyadah Mahmood (University of Zakho, Iraq); Adnan Brifcani (Duhok Polytechnic University, Iraq) [1570523016]			
	Printed name and signature of presenter: Mayyadah Mahmood	Yes	Yes	
3	*A Comparison of Three Classification Algorithms for Handwritten Digit Recognition* Maiwan Bahjat Abdulrazzaq (University of Zakho, Iraq); Jwan Najeeb Saeed (Duhok Polytechnic University, Iraq) [1570523025]			
	Printed name and signature of presenter: Maiwan Bahjat Abdulrazzaq	Yes	Yes	
4	*Diagnosis of The Parkinson Disease Using Enhanced Fuzzy Min-Max Neural Network and OneR Attribute Evaluation Method* Osama Al Sayaydeha (Universiti Malaysia Pahang, Malaysia); Mohammed Falah Mohammed (Staf 2178, FSKKP, Universiti Malaysia Pahang (UMP), Malaysia) [1570523081]			
	Printed name and signature of presenter: Mohammed Falah Mohammed	Yes	Yes	

Comments

15:40: *A Comparison of Three Classification Algorithms for Handwritten Digit Recognition*

Maiwan Bahjat Abdulrazzaq (University of Zakho, Iraq); Jwan Najeeb Saeed (Duhok Polytechnic University, Iraq)

Abstract: Handwritten digits recognition is considered as a core to a diversity of emerging application. It is used widely by computer vision and machine learning researchers for performing practical applications such as computerized bank check numbers reading. However, executing a computerized system to carry out certain types of duties is not easy and it is a challenging matter. Recognizing the numeral handwriting of a person from another is a hard task because each individual has a unique handwriting way. The selection of the classifiers and the number of features play a vast role in achieving best possible accuracy of classification. This paper presents a comparison of three classification algorithms namely Naive Bayes (NB), Multilayer Perceptron (MLP) and K_Star algorithm based on correlation features selection (CFS) using NIST handwritten dataset. The objective of this comparison is to find out the best classifier among the three ones that can give an acceptable accuracy rate using a minimum number of selected features. The accuracy measurement parameters are used to assess the performance of each classifier individually, which are precision, recall and F-measure. The results show that K_Star algorithm gives better recognition rate than NB and MLP as it reached the accuracy of 82.36%.

Bio for Maiwan Bahjat Abdulrazzaq: Lecturer in Computer Science dept./University of Zakho Research interest: Artificial Intelligence, Data Mining, Security, Machine Learning, Pattern recognition, Big Data.

Comments

16:00: *Diagnosis of The Parkinson Disease Using Enhanced Fuzzy Min-Max Neural Network and OneR Attribute Evaluation Method*

Osama Al Sayaydeha (Universiti Malaysia Pahang, Malaysia); Mohammed Falah Mohammed (Staf 2178, FSKKP, Universiti Malaysia Pahang (UMP), Malaysia)

Abstract: Parkinson's disease is a dangerous disease that attacks the nervous system and affects it negatively over time. Early diagnosis of this disease is necessary for identifying the most appropriate treatment for preventing the disease from worsening. It can be diagnosed by examining the symptoms of the patient. Recently, researchers have used voice disorders to diagnose Parkinson's disease by extracting attributes from audio recordings of affected people and using classification techniques to provide accurate diagnoses. In this paper, an enhanced fuzzy min-max neural network with the OneR attribute evaluator (EFMM-OneR) is proposed as a hybrid model for diagnosing Parkinson's disease. The proposed model consists of two stages: In the first stage, feature selection is used to identify and remove irrelevant, redundant, or noisy features from the provided dataset. In the second stage, the enhanced fuzzy min-max (EFMM) neural network is used for the classification process. The results demonstrated the ability of the EFMM-OneR model to improve the classification accuracy as compared to other classifiers from the literature.

Bio for Mohammed Falah Mohammed: Mohammed Falah Mohammed received the B.Eng. degree in computer engineering from the Technical College of Mosul, Mosul, Iraq, and the M.Sc. degree in wireless and mobile system and the Ph.D. degree in computational intelligence from the School of Electrical and Electronic Engineering, University of Science Malaysia, Nibong Tebal, Malaysia, in 2006, 2010, and 2014, respectively. His current research interests include fuzzy neural networks, multi agent systems, and pattern classification

Comments

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Comments

15:00: *Optimized FPGA Implementation of the CRC Using Parallel Pipelining Architecture*

Noor Qaqos (Duhok Polytechnic University & Shekhan Technical Institute, Iraq)

Abstract: Cyclic Redundancy Check (CRC) plays a major role in data storage, communication systems and networking environment fields to detect errors. The speed of transmitting data with optimized hardware utilization are the main challenges nowadays. Thus, CRC calculation becomes a bottleneck for the system implementations. The aim of this paper is to design and implement the CRC5 and CRC8 systems that are used for USB token packet and ATM protocols, respectively. A parallel pipelining method is used to implement the proposed CRC architecture for both CRC encoder and decoder systems to achieve high throughput data with optimized hardware resources. A proposed architecture doesn't base on Look-Up Table (LUT) to store pre-calculated CRC values or F-matrix in its implementation as in the previous works. The system designed and implemented based on Spartan-3E FPGA chip, Very High-Speed Integrated Circuit Description Language (VHDL) used to write the related code. The whole proposed architecture is functionally simulated and verified using the Xilinx ISE 9.2i simulator.

Comments

15:20: *Different Model for Hand Gesture Recognition with a Novel Line Feature Extraction*

Mayyadah Mahmood (University of Zakho, Iraq); Adnan Brifcani (Duhok Polytechnic University, Iraq)

Abstract: Hand gestures are commonly used for communication between both impaired community and normal people. Sign languages stand for the human languages of deaf people. They form the most growing domain of research worldwide. A number of techniques was developed in this area lately. It is recognized by means of deducing the features involved in the use of hand gesture. As a matter of fact, various approaches, namely the vision-based, the data-glove-based, the colored-marker and the Electromyogram (EMG) approaches have been utilized by researchers to recognize the different hand gestures implemented in many different fields such as the whole approaches which can be divided into four main categories, viz. Data Collection, Image Processing, Feature Extraction and Gesture Recognition. Only few of those categories have been discussed in this paper to be compared between the accuracy rates by applying Artificial Neural Network (ANN) classification. This classification is based on different models and a novel method for Real-Time Hand Gesture Recognition System (RTHGRS). The latter has used one line (fifty features) extracted from black and white processed images to recognize the numbers from (1-10) in Kurdish Sign Language (KurdSL) using one hand only with accuracy 98%.

Bio for Mayyadah Mahmood: Staff member in Computer science Department in University of Zakho Research interest: Machine Learning, Computer Vision, Data Mining, Security, Image Processing, Pattern recognition, Artificial Intelligence .

Comments

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- **Name of the Researcher (s)/ Presenter (s):**.....

- **Title of the Presenting Research/ Paper:**

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- **Time:** 3:00 — 3 session 3/4/2019

- **Avenue: DPU- Technical Institute of Duhok- Azadi Hall- Seminar Hall No.** 1

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1	Mayyadah Ramiz Mahmood د. ميادة رامز محمود	علوم حاسبات	University of Zakho	mayyadah.mahmood@uoz.edu.krd	
2	Amira Bibo Sallow د. أميرة بيبو سلو	Computer Science	Nawroz university	amo_bibo@yahoo.com	
3	Maiwan Bahjat Abdul-Razzaq د. ميوان بهجت عبد الرزاق	=	University of Zakho	maiwan.abdulrazzaq@uoz.edu.krd	
4	Ahmed Behr Fathil احمد فهر فاضل	=	University of Mosul	Ahmedfeh@uomosul.edu.iq 07738497088	
5	Dr. Riyadh Z. Mahmood د. رياض زكلول محمود	=	University of Mosul	riyadh_1970@yahoo.com	
6	Sundos Muhammad Ali سندس محمد علي	=	Nawroz University	sundoszebary3d@gmil.com	
7	Nermeen Emad Sadq نرمين عماد صادق	ادارة اعمال	معهد دهوك	diadolmodlemad@.com.	

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8	Abdulsalam M. Jarjees عبدالسلام محمد جرجيس	Comp. Tech. Eng هندسة تقنيات الحاسبات	DPU / BTI معهد بردرش التقني Bardarash Tech. Inst.	Salam_mja62@yahoo.com Abdulsalam.Mohammed@DPU.edu.krd (07507399882)	
9	Rana saad Mohammed د. رنا سعد محمد	Mustansiriyah university الجامعة المستنصرية / كلية التربية الأساسية	Education College / Mustansiriyah university الجامعة المستنصرية / كلية التربية	rana saad 2014@gmail.com	
10	Boshra F. Zopon AL-Bayaty بشرى فاضل زبون البياتي	Computer science software engineering & data mining	Mustansiriyah University College of science computer science dep.	bushraalbayaty123@gmail.com 07735395269	
11	حسام كريم فرحان Husam Kareem Farhan	Computer Engineering	ministry of Education of Iraq	husam.kar@gmail.com	
12	Zryan Najat Rashid زريان نجاة رشيد	Computer Science	Sulaimani polytechnic University	Zryan.rashid@spu.edu.iq 0770 159 6200	
13	Rezhan Star Omar ڕێژەن ستار عمر	Computer Science	Sulaimani Polytechnic University	rezhan.deja@gmail.com	
14	Omar Malallah Mozahim عمر مزاحم مالالله	Computer Engineer	Zakho University computer Sc Dept.	Omarmalallah@uoz.edu.krd	

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15	Mohammed Falah Mohammed	computer Science	University Malaysia Pahang	falah@ump.edu.my	
16	Noor Najeeb Qaqos	computer Engineering	Duhok polytechnic university	Noor.qaqos@dpu ~~dpu.edu~~.. .edu.krd	
17	Maiwan Bahjat Abdulrazzaq ميوان بهجت عبد الرزاق	Computer Science	University of Zakho	maiwan.Abdulrazzaq@uoz.ded.krd	
18	Omer Mohammed Salih	Computer Engineer	University of Duhok polytechnic ~~univ~~	omar.mhamed@dpu.ed.krd	
19	Karzan Awni Abduljabar	plant production	Duhok polytechnic uni	Karzan.awni82@gmail.com	
20	Mohammed.A.M.sadeq محمد عبدالرزاق محمد صادق	computer science	DPU	mohammed.abdulrazaq@dpu.edu.krd	
21	Ramadhan J. Mstafa	computer science	UOZ	ramadhan.mstafa@uoz.edu.krd	

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22	د. عادل صبري عيسى Adel Sabry Eesa	Computer Science	Zakho University	adelsabryissa@gmail.com	
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