

3RD INTERNATIONAL CONFERENCE ON INFORMATION TECHNOLOGY & SOCIETY

&

5TH INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE & COMPUTER SCIENCE



31st July 2017 & 1st August 2017
Bayview Beach Resort, Batu Ferringhi Beach,
Pulau Pinang, Malaysia

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**Foreword by the Rector,
International Islamic University College of Selangor
PROF. DATO' DR. AB. HALIM BIN TAMURI**



السلام عليكم ورحمة الله

Alhamdulillah, praise to Allah SWT for His blessing. I would like to extend my warmest welcome to the keynote speaker, presenters and participants to the **Multi-Conference; International Conference on Information Technologies and Society (ICITS 2017), 3rd Global Conference On Economics And Management Sciences (GEMS 2017), 5th Inter. Conf. on Artificial Intelligence, Comp. Science & Information Tech. 2017 (AICSIT 2017), & 4th World Conference on Integration of Knowledge 2017 (WCIK 2017).**

After successfully conducting the first conference in 2010, we have been looking forward to organizing the next conference and collaborating with WorldConferences.Net, Koperasi Kolej Universiti Islam Antarabangsa Selangor. By organizing International Conference on Information Technologies and Society (ICITS) we are proud to manage the conference as scheduled. With the theme “IT and Society” this conference covers topics on information technology and the society in education and industry.

It is our hope that by organizing this conference, we will be able to discuss new ideas, challenges and ongoing fundamental researches in the field of information technology. ICITS 2017 shall serve as a platform to share knowledge and information related to information technology.

On behalf of the committee, I would like to take this opportunity to express our deepest gratitude to all reviewers and also to thank the keynote speaker, authors, session chairperson and delegates for your great support and contribution to ICITS 2017.

Last but not least, congratulation to Faculty of Information Science & Technology because without their tireless effort, hardworking and commitment, this event would not be possible. Hope we will meet again in ICITS 2018.

Thank you.

PROGRAM TENTATIVE

5th Inter. Conf. on Artificial Intelligence, Comp. Science & Information Tech. 2017 (AICSIT 2017)
3rd International Conferences on Information Technology & Society (ICITS 2017)

JULY 31, 2017 (MONDAY)

8.00AM – 8.30AM	8.30AM – 11.00AM	10.30AM –	11.00 AM – 12.30 PM	12.30PM – 2.00PM	2.00PM – 4.00PM	4.00PM – 5.20 PM
DAY 1 REGISTRATION (M FLOOR)	PARALLEL SESSION 1 HIBISCUS ROOM	MORNING BREAK COFFEE/ TEA BREAK	-KEYNOTE SPEECH -OPENING SPEECH & CEREMONY -1 BEST PAPER 3 EXCELLENT PAPER AWARD -LUCKY DRAW -PHOTO SESSION HIBISCUS ROOM	LUNCH & PRAYER BREAK	PARALLEL SESSION 2 HIBISCUS ROOM	PARALLEL SESSION 3 HIBISCUS ROOM

AUGUST 1, 2017 (TUESDAY)

	8.30AM - 10.30AM	10.30AM	11.30AM - 12.50PM	12.50PM-2.00PM
DAY 2 (M FLOOR)	PARALLEL SESSION AICSIT & ICITS HIBISCUS ROOM	MORNING BREAK COFFEE/ TEA BREAK	CONTINUE PARALLEL SESSION AICSIT & ICITS HIBISCUS ROOM	LUNCH END

KEYNOTE SPEAKER : Prof. Dr Rozhan M. Idrus
University Sains Islam Malaysia (USIM)
Title : IT & Society: What's around the corner?

LUNCH : LA VERANDA COFFEE HOUSE – Ground Floor
PRAYER ROOM : MUSOLLAH – Ground Floor

**PARALLEL PRESENTATION SESSION 1
DAY 1 - MONDAY
(8.30AM - 10.50AM)
HIBISCUS ROOM**

1.	<p>IT 30 (5.00 – 5.20PM)</p> <p>DESIGN OF A MICROCONTROLLER BASED RF REMOTE CONTROL FOR STEPPER MOTOR CONTROL</p> <p>DR ASHARDI ABAS & ABU BAKAR</p>
2.	<p>AICSIT 011 (8.50AM – 9.10AM)</p> <p>CLOGVIS: CRIME DATA ANALYSIS AND VISUALIZATION TOOL</p> <p>HAMDAN Z. ALSHAMMARI</p>
3.	<p>AICSIT 014 (9.10AM – 9.30AM)</p> <p>AUTOMATED FRAMEWORK OF WHITE BLOOD CELL (WBC) DETECTION AND COUNTING IN BLOOD SMEAR IMAGES</p> <p>SYADIA NABILAH BINTI MOHD SAFUAN, DR. MOHD RAZALI BIN MD TOMARI, DR. WAN NURSHAZWANI BINTI WAN ZAKARIA</p>
4.	<p>AICSIT 018 (9.30AM – 9.50AM)</p> <p>FRAMEWORK FOR ONLINE BUSINESS TRANSACTION USING INSTANT MESSAGING WITH TEXT BASED INFORMATION RETRIEVAL AND BUSINESS ONTOLOGY</p> <p>ENGKU FADZLI HASAN SYED ABDULLAH, NUR FARAH AFIFAH AHMAD SUKRI</p>
5.	<p>AICSIT 019 (9.50AM – 10.10AM)</p> <p>LOWER LIMB WALKING GAIT PROFILING USING MARKER-LESS MOTION CAPTURE TO ASSIST PHYSIOTHERAPY TREATMENT</p> <p>AZRUL AMRI JAMAL, NOR FARAHANA ZAINUL HISHAM, SYED ABDULLAH FADZLI, WAN MOHD RIZHAN WAN IDRIS, FATHURRAHMAN LANANAN</p>

6.	<p>AICSIT 020 (10.10AM – 10.30AM)</p> <p>A PROPOSED FRAMEWORK FOR AUTOMATED ONLINE QUESTION AND ANSWERING SYSTEM FOR INTERVIEW USING LATENT SEMANTIC ANALYSIS</p> <p>SYED ABDULLAH FADZLI, NORSYAHIRA JANU, AZRUL AMRI JAMAL</p>
7.	<p>AICSIT 021 (10.30AM – 10.50 AM)</p> <p>DEVELOPMENT AND IMPLEMENTATION OF VISUAL ODOMETRY SYSTEM USING QUADCOPTER FOR INVENTORY MAINTENANCE</p> <p>DR. SATHEESH KUMAR GOPAL, KARNIK RAM, HARISH S., APEKSHA AVINASH SOMALINGA & HANIS S.</p>
<p>PARALLEL PRESENTATION SESSION 2</p> <p>DAY 1 - MONDAY</p> <p>(2.00PM - 4.00PM)</p> <p>HIBISCUS ROOM</p>	
1.	<p>IT 19 (2.00PM – 2.20PM)</p> <p>KAJIAN AWAL PENGGUNAAN PERISIAN PENGECEMAN SUARA</p> <p>FARHANA, HELYAWATI, SHAKIRAH & DR SITI ZAHARAH</p>
2.	<p>IT 20 (2.20PM – 2.40PM)</p> <p>KEPERLUAN ANALISA AWAL APLIKASI MUDAH ALIH MUROJAAH AL-QURAN</p> <p>HELYAWATI, FARHANA, RAFIZA, SHAKIRAH & DR ROSLINDA</p>
3.	<p>IT 24 (2.40PM – 3.00PM)</p> <p>PENVISUALAN KONSEP DALAM PEMBELAJARAN PENGATURACARAAN</p> <p>NOOR FADZILAH AB RAHMAN</p>
4.	<p>IT 28 (3.00PM – 3.20PM)</p> <p>PENGURUSAN E-SISA & KOMUNITI: CADANGAN RANGKA KERJA SISTEM PENGURUSAN E-SISA KOMUNITI KUIS</p> <p>RAFIZA, DR. NUR KALIZA, NOOR FADZILAH, HELYAWATI BAHARUDIN</p>

5.	<p>IT 34 (3.20PM – 3.40PM)</p> <p>KEPENTINGAN PERISISAN DALAM PENGHASILAN PRODUK ANIMASI DUA DIMENSI (2D). ANALISIS KE ATAS TOON BOOM HARMONY DAN ADOME ANIMATE CC.</p> <p>AHMAD SYUKRI ADNAN</p>
6.	<p>IT 35 (3.40PM – 4.00PM)</p> <p>PEMBANGUNAN KOMIK DIGITAL : HADIAH</p> <p>SHAKIRAH, AMEERA, FARHANA & HELYAWATI</p>
<p>PARALLEL PRESENTATION SESSION 3 DAY 1 - MONDAY (4.00PM – 5.20PM) HIBISCUS ROOM</p>	
1.	<p>AICSIT 022 (4.00PM – 4.20PM)</p> <p>FRAMEWORK FOR ONLINE BUSINESS TRANSACTION USING INSTANT MESSAGING WITH TEXT BASED INFORMATION RETRIEVAL AND BUSINESS ONTOLOGY</p> <p>SYED ABDULLAH FADZLI, NUR FARAH AFIFAH AHMAD SUKRI, AZRUL AMRI JAMAL, HASNI HASAN, ROHANA ISMAIL</p>
2.	<p>AICSIT 026 (4.20PM – 4.40PM)</p> <p>MACHINE LEARNING IN PROGRESSIVE ENEMY ARTIFICIAL INTELLIGENCE</p> <p>GLYNN LLYWYLLYN M. BACANTO, GODFREY MARR S. RIVERA</p>
3.	<p>AICSIT 040 (4.40PM – 5.00PM)</p> <p>ENRINCHING INFORMATION TECHNOLOGY COURSE MATERIALS BY USING YOUTUBE</p> <p>LEON ANDRETTI ABDILLAH</p>
4.	<p>IT 25 (5.00PM – 5.20PM)</p> <p>THE BASICS OF GAMIFICATION</p> <p>DR NURKALIZA KHALID</p>

PARALLEL PRESENTATION SESSION 4
DAY 2 - TUESDAY
(8.30AM - 12.50PM)
HIBISCUS ROOM

1.	<p>GEMS 020 (8.30AM – 8.50AM)</p> <p>PORTFOLIO ANALYSIS ON THE EARNINGS, DEBT, LIQUIDITY AND PROFITABILITY OF FIVE INDUSTRIES IN MALAYSIA STOCK MARKET</p> <p>ASSOC. PROF. DR. IR. CHENG FAN FAH; PROF. DR. ANNUAR NASIR; CHENG SEOW VOON; LEE HUI SHAN</p>
2.	<p>AICSIT 038 (8.50AM – 9.10AM)</p> <p>A FRAMEWORK FOR SOCIAL NETWORK ANALYTICS AND ITS APPLICATIONS</p> <p>DUC NGHIA PHAM, MOHAMED FARID NOOR BATCHA, MOHAMAD KHARULLI OTHMAN, ONG HONG HOE</p>
3.	<p>AICSIT 039 (9.10AM – 9.30AM)</p> <p>SOCIAL MEDIA STRATEGIC INFLUENCE IN CHOICE OF TOURISM DESTINATION (CASE STUDY AT JATILUWIH TOURISM VILLAGE IN TABANAN REGENCY BALI PROVINCE)</p> <p>DEWA PUTU OKA PRASIASA</p>
4.	<p>AICSIT 037 (9.30AM – 9.50AM)</p> <p>GIS FOR SOIL NUTRIENT MAPPING: SITES BATU 17, YAN, KEDAH</p> <p>NURUL SYAKIRA SAMSURI, MOHAMMAD AUFA, MOHD SHAHRIL SHAH, MOHD SYAIFUDIN, MUHAMMAD NAIM</p>
5.	<p>AICSIT 034 (9.50AM – 10.10AM)</p> <p>OPTIMIZING OF THE WAG PROCESS USING DYNAMIC PROXY, GENETIC ALGORITHM AND ANT COLONY OPTIMIZATION</p> <p>MENAD NAIT AMAR, NOURDDINE ZERAIBI, KHEIREDDINE REDOUANE</p>

6.	<p>AICSIT 044 (10.10AM – 10.30AM)</p> <p>A SURVEY OF THE TOP TWENTY RISKS FACTORS IN SOFTWARE DEVELOPMENT PROJECTS IN SAUDI ARABIA</p> <p>FAHAD HARBI, HALIM BOUSSABAIN</p>
7	<p>AICSIT 045 (10.30AM – 10.50AM)</p> <p>MAPPING THE INTERACTION BETWEEN THE RISK, SUCCESS FACTORS AND SUCCESS CRITERIA BY USING THE NETWORK ANALYSIS IN SOFTWARE DEVELOPMENT PROJECTS</p> <p>FAHAD HARBI, HALIM BOUSSABAIN</p>
8.	<p>AICSIT 041 (10.50AM –11.10AM)</p> <p>FRAMEWORK FOR ONLINE BUSINESS TRANSACTIONS VIA INSTANT MESSAGING USING NATURAL LANGUAGE PROCESSING AND BUSINESS ONTOLOGY</p> <p>SYED ABDULLAH FADZLI, NUR FARAH AFIFAH AHMAD SUKRI, AZRUL AMRI JAMAL, HASNI HASSAN, ROHANA ISMAIL</p>
9.	<p>AICSIT 042 (11.10AM – 11.30AM)</p> <p>SYSTEM AND METHOD TO PROFILE MUSLIM PRAYER (SOLAT) PERFORMANCE</p> <p>AMRU YUSRIN AMRUDDIN , MUHAMMAD AWIS JAMALUDDIN JOHARI</p>
10.	<p>AICSIT 043 (11.30AM –11.50AM)</p> <p>MAGNITUDE OF DIFFERENCE (MDV) BETWEEN TARGET VECTOR AND TRIAL VECTOR IN ANUDE AND STANDARD DIFFERENTIAL EVOLUTION</p> <p>SITI KHADIJAH MOHD SALLEH, DIARMOID O’DONOGHUE, ABDUL SAMAD SHIBGHATULLAH</p>
11.	<p>IT 16 (11.50AM – 12.10PM)</p> <p>SOCIAL MEDIA MARKETING AND ENTREPRENEURS: THE USES OF SOCIAL MEDIA AS BUSINESS PLATFORM BY SMALL BUSINESSES IN MALAYSIA</p> <p>NOOR FADHIHA MOKHTAR</p>

12.	<p>IT 31 (12.10PM – 12.30PM)</p> <p>HISTOGRAM-BASED THRESHOLD SELECTION OF RETINAL FEATURE FOR IMAGE REGISTRATION</p> <p>ROZIANA RAMLI, MOHD YAMANI IDNA IDRIS, KHAIRUNISA HASIKIN & NOOR KHAIRIAH A. KARIM</p>
13.	<p>IT 37 (12.30PM – 12.50PM)</p> <p>A NEW COMPREHENSIVE B2C MODEL BASED ON TRUST REQUIREMENTS</p> <p>ASIRI, AHMAD YAHYA</p>
<p>PARALLEL PRESENTATION SESSION 4</p> <p>DAY 2 - TUESDAY</p> <p>(8.30AM – 1.00PM)</p> <p>ROOM (TO BE ANNOUNCE)</p>	
1.	<p>IT 07 (8.30AM – 8.50AM)</p> <p>THE UNDERSTANDING OF EXCHANGEABLE IMAGE FILE (EXIF) METADATA OF IMAGES: TOWARDS DISSEMINATING THE AWARENESS TO THE SOCIETY</p> <p>SHAFINAZ, DR JUZLINDA, LAILATUL QADRI, NORZALINA, SITI NOOR, KHAIRUL ASHRAF</p>
2.	<p>IT 08 (8.50AM – 9.10AM)</p> <p>THE REVIEW OF WIRELESS GENERATION</p> <p>CHE WAN SHAMSUL BAHRI, SHAFINAZ MOHAMMAD NIYAZ KHAN</p>
3.	<p>IT 09 (9.10AM – 9.30AM)</p> <p>STATISTICAL – BASED COLLOCATION EXTRACTION FOR MALAY COMPOUND NOUNDS</p> <p>TUAN NORHAFIZAH TUAN ZAKARIA, DR MOHD JUZAIDDIN AB AZIZ</p>
4.	<p>IT 12 (9.30AM – 9.50AM)</p> <p>A REVIEW ON THE INNOVATIVE USE OF SCREENCAST TECHNIQUE FOR LEARNING 3D ANIMATION SOFTWARE</p> <p>NURUL SYAKIRA SAMSURI, MOHAMMAD AUFA, MOHD SHAHRIL SHAH, MOHD SYAIFUDIN, MUHAMMAD NAIM</p>

5.	<p>IT 14 (9.50AM – 10.10AM)</p> <p>SOFTWARE MAINTENANCE STUDY: COSTS AND ISSUES</p> <p>DR SYARBAINI AHMAD & ASRINA SURIANI MD YUNUS</p>
6.	<p>IT 17 (10.10AM – 10.30AM)</p> <p>IN DEPTH MONITORING OF ACCESS TO INFORMATION (A21) PROGRAMME OF BANGLADESH GOVERNMENT</p> <p>AHSANULLAH M DEWAN & SHAMS ARA NAZMIN</p>
7	<p>IT 27 (10.30AM – 10.50AM)</p> <p>MOBILE APPLICATION DEVELOPMENT FOR CHILDREN: AL-KHAFIRUN AND AN-NASS VERSES IN MALAY TAFSIR</p> <p>HANIZA OTHMAN, KHODIJAH, WAN NUR KHALISHAH MASRY & DR KALTHOM HUSAIN</p>
8.	<p>IT 04 (10.50AM – 11.10AM)</p> <p>PEMERHATIAN TERHADAP PELAKSANAAN BYOD DI DALAM ORGANISASI</p> <p>MARZIANA ABDUL MAJID & DR ZULKEFLI MANSOR</p>
9.	<p>IT 10 (11.10AM – 11.30AM)</p> <p>PEMBANGUNAN APLIKASI MUDAH ALIH PANDUAN BERWUDHUK DAN MENDIRIKAN SOLAT FARDHU (SMART SOLAT)</p> <p>NUR MUIZ MOHAMED SALLEH, KHIRULNIZAM ABD RAHMAN, DR SYARUL AZMAN SHAHARUDDIN, DR MOHD FARID RAVI ABDULLAH & YANG XIN JIAN LUKMAN</p>
10.	<p>IT 11 (11.30AM –11.50PM)</p> <p>KATA MAJMUK BAHASA MELAYU: ISU DAN MODEL CADANGAN</p> <p>TUAN NORHAFIZAH TUAN ZAKARIA & DR MOHD JUZAIDDIN ABD AZIZ</p>
11.	<p>IT 18 (11.50AM – 12.10PM)</p> <p>REKABENTUK PEMBANGUNAN PERISISAN HAFAZAN AL-QURAN (EZHIFZ) BERASASKAN GAYA PEMBELAJARAN VARK</p> <p>NOR MUSLIZA MUSTAFA, DR MOKMIN BASRI, DR SEDEK ARIFFIN</p>

<p>12.</p>	<p>IT 21 (12.10PM -12.30PM)</p> <p>ANALISIS KAJIAN PASARAN PROGRAM IJAZAH SARJANA MUDA FSTM DI KALANGAN PELAJAR ASASI DI KOLEJ UNIVERSITI ISLAM ANTARABANGSA SELANGOR</p> <p>ASRINA SURIANI, MARZIANA, FARHANA, MOHD AZRUL & MAISARAH HANIS</p>
<p>13.</p>	<p>IT 22 (12.30PM – 12.50PM)</p> <p>ANALISIS FAKTOR-FAKTOR YANG MEMPENGARUHI MINAT TERHADAP WATAK KARTUN ANIMASI OLEH PENONTON DI MALAYSIA</p> <p>ASRINA SURIANI, MARZIANA, DON DANIYAL, AHMAD SYUKRI, MAISARAH HANIS</p>

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Pemerhatian terhadap Pelaksanaan BYOD di dalam Organisasi

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ABSTRAK

"Bring Your Own Device (BYOD)" merupakan satu amalan baru di organisasi yang membenarkan kakitangan membawa peralatan peribadi seperti komputer riba, telefon pintar dan tablet untuk melaksanakan tugas pejabat. BYOD menyeimbangkan keselesaan emosi kakitangan dengan tekanan kerja yang dihadapi. Dari sudut pandang pertama, ia mendatangkan keuntungan kepada organisasi dalam menjimatkan kos operasi. Di sesetengah organisasi, pihak pengurusan tidak dapat menyediakan peralatan yang cukup menyebabkan kakitangan perlu berkongsi dan menunggu giliran untuk menggunakan peralatan tersebut. Melalui amalan BYOD, kakitangan berasa lebih selesa menggunakan peralatan sendiri dalam melaksanakan tugas pejabat. Kesannya, produktiviti semakin meningkat lantaran kakitangan bekerja dalam suasana yang lebih selesa. Namun, di sebaliknya ia mendatangkan risiko ke atas keselamatan maklumat organisasi. Kajian ini merupakan penelitian terhadap pelaksanaan BYOD di organisasi melalui pembacaan artikel-artikel jurnal. Ia merangkumi sejauh mana penekanan polisi BYOD di organisasi, limitasi capaian perisian dan maklumat yang dibenarkan ke atas kakitangan, dan isu-isu yang timbul dari amalan BYOD ini. Hasil pemerhatian ini dapat mengenalpasti permasalahan BYOD dalam konteks pengurusan dan keselamatan maklumat terhadap organisasi.

Kata kunci: Bring Your Own Device (BYOD), Organisasi

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3rd INTERNATIONAL CONFERENCES ON INFORMATION TECHNOLOGY & SOCIETY 2017

The Understanding of Exchangeable Image File (Exif) Metadata of Images: Towards Disseminating The Awareness To The Society

Shafinaz Mohammad Niyaz Khan, Juzlinda Mohd Ghazali, Lailatul Qadri Zakari, Norzalina Zainudin, Siti Noor Ahmad & Khairil Ashraf Elias

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ABSTRACT

Most people nowadays, prefer to upload or store their personal digital images on social media or websites, but how far do they know about what kind of metadata have been stored behind those digital images that they are revealing to other people who can access the Internet? How aware are the lecturers and students of Faculty of Science and Information Technology (FSTM) of this issue in order to save the society from being misled through posting images by using the social media and websites? This research is meant to study on how far does the knowledge of EXIF metadata of digital images is being acquired and understood among the lecturers and students of FSTM in order for them to educate the society. This is to make aware of society's behaviors, rights and protections on personal information through their digital images in the Internet world. The findings of this research show that there is a clear positive correlation between having the knowledge of EXIF metadata among the respondents with disseminating the awareness of it to the society. On the other hand, there is a negative correlation between having the knowledge of digital images among the respondents with disseminating the awareness of EXIF metadata of digital images to the society. It could be concluded that those with the knowledge of EXIF metadata of digital images could possibly disseminate the awareness of it to the society as for awareness and concern purposes, whereas those with the knowledge of digital images but without the knowledge of EXIF metadata of digital images could possibly be unable to disseminate the awareness of EXIF metadata of digital images to the society.

Keywords: digital images, EXIF metadata

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3rd INTERNATIONAL CONFERENCES ON INFORMATION TECHNOLOGY & SOCIETY 2017

Comparison between the Mobile Wireless Communication Networks of 1G To 5G

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ABSTRACT

Wireless communication is the transfer of information either near or far without the use of cables. In this paper we will discuss the evolution and development of various generations of mobile wireless technologies along with their interests and advantages over others. The paper studies literally on the comparison of mobile wireless communication networks. Specifically, we compared between 1G (first generation) to 5G (fifth generation) mobile networks. It supports the idea of each comparison made by different scholars. The paper asserts on the different aspects of each generation mobile network. These aspects were extensively dwelled from selected scholars. The paper concludes by calling a future prospect on the next generation communication network.

Keywords: 1G, 2G, 3G, 4G, 5G, Generation, Technology, Mobile, Wireless Communication, Networks

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Statistical-based Extraction for Malay Compound Nouns

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ABSTRACT

Collocation extraction is an important part in many natural language processing tasks such as machine translation, word sense disambiguation and information retrieval. This paper presents a statistical-based collocation extraction for Malay compound nouns. The Mutual Information was used to measure the association strength of compound nouns. Then, we used syntactic patterns and compared the precision using statistical-based and syntactic patterns to propose a hybrid approach (statistical-based and syntactical-based) to extract the compound nouns using collocation extraction methodology. The precision results show that the hybrid approach can be used for Malay collocation extraction for compound nouns.

Keywords: collocation; Malay; statistical-based; Mutual Information; syntax

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Pembangunan Aplikasi Mudah Alih Panduan Berwudhuk dan Mendirikan Solat Fardhu (SmartSolat)

Nur Muizz Mohamed Salleh, Khirulnizam Abd Rahman, Hasnuddin Abd Rahman, Syarul Azman Shaharuddin, Mohd Farid Ravi Abdullah & Yang Xin Jian Lukman

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ABSTRAK

Berdasarkan kepada beberapa kajian terdahulu yang telah dilakukan terhadap kaedah pembelajaran wudhuk dan solat terhadap 60 responden muallaf di Institut Dakwah Islam menunjukkan kebanyakan dari mereka menginginkan tenaga pengajar menggunakan kaedah pengajaran yang pelbagai. Oleh yang demikian adalah penting dalam proses penyampaian mesej dan maklumat Islam kepada golongan saudara baru khususnya dalam perkara berkaitan wuduk dan solat yang terdiri dari pelbagai latar belakang disampaikan tidak tertakluk kepada ceramah sahaja. Sehubungan dengan itu, kertas kerja ini membincangkan proses pembangunan aplikasi mudah alih panduan wuduk dan solat fardhu telah dibangunkan sebagai rujukan sokongan bagi membantu para muallaf. Aplikasi ini meliputi kaedah mengambil wudhuk dan mendirikan solat-solat fardhu melalui kaedah interaktif dan simulasi masa-nyata.

Kata kunci: collocation; Aplikasi mudah alih, Wudhuk, Solat Fardhu

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Kata Majmuk Bahasa Melayu: Isu dan Model Cadangan

Tuan Norhafizah Tuan Zakaria, Mohd Juzaidin Ab Aziz, Mohd Rusmadi Mokhtar & Saadiyah Darus

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ABSTRAK

Pemajmukan merupakan satu proses yang merangkaikan dua kata dasar (atau lebih), membentuk satu kata baru yang mempunyai makna yang khusus. Secara amnya, kata majmuk mempunyai dua bahagian iaitu kepala (juga dipanggil inti) dan penerang. Kertas kerja ini akan membincangkan isu berkaitan dengan kata majmuk Bahasa Melayu dan mencadangkan satu model pembangunan bagi mengecam kata majmuk dalam ayat Bahasa Melayu. Model cadangan ini melibatkan sintaksis dan semantik Bahasa Melayu.

Kata kunci: Kata majmuk, Bahasa Melayu, Sintaksis, Semantik, Inti dan penerang

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A Review on the Innovative Use of Screencast Technique for Learning 3D Animation Software

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ABSTRACT

A screencast is a digital video and audio recording of what occurs on a presenter's computer screen, and it can be used to create sophisticated, information-rich multimedia presentations. Previous research shows that the use of screencast as instructional media in the teaching and learning process is important, especially in learning the use of a software application for 3D animation software. A traditional book to learn 3D animation is less interesting and sometimes difficult to understand. In addition, individual students has differences in processing information as they are differ in terms of cognitive and learning style. However, the exact design effectiveness of screencast also depends on the cognitive style and learning style of the students. Students will easily process the given information, if it is performed in accordance with their preferred or dominant learning style. In this review, we describe the innovative use of the screencasting technique in education especially in learning 3D animation software. We also summarize the guideline process and screencasting development techniques reported by different researchers in an attempt to find a suitable technique for preparing screencast video tutorial for learning 3D animation software. The aim of this review is to summarize recent developments in research on screencasting in education and to try finding some challenging issues that need to be solved for future research.

Keywords: screencast technique, 3D animation

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Social Media Marketing and Entrepreneurs: The Uses of Social Media as Business Platform by Small Businesses in Malaysia

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ABSTRACT

The purpose of this paper is to determine the social media marketing practices by entrepreneurs by using social media as business platform. Perhaps social media becomes an advanced marketing platform and a popular choice of promoting businesses nowadays. This study adopted Technology, Organization and Environment (TOE) model by Tornatzky & Fleischer (1990) as a part of theoretical framework. This study mainly focus on entrepreneurs in Kelantan and Terengganu as these two states were listed among the lowest average household income in Malaysia. Ten interviews were conducted with small business owners in Kelantan and Terengganu. The findings of this study revealed that these entrepreneurs were implemented on social media marketing to promote their businesses. Besides, social media marketing indicated a positive impact to business performance; either in financial and non-financial aspects. The findings also found that most small business owners preferred to use Facebook and Instagram rather than other social media marketing platform such as Twitter, Pinterest, and Flickr. Most participants were aware with the current technology needs in the business and competitive pressure indirectly influenced them to adopt the social media marketing. This paper adds theoretical knowledge on social media marketing practices, thus giving a foundation on how other small businesses can effectively implement social media marketing for their business activities.

Keywords: social media marketing, small business, TOE model

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In-depth Monitoring of Access to Information (a2i) Programme of Bangladesh Government

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ABSTRACT

‘Digital Bangladesh’ is an integral part of the Bangladesh Government’s *Vision 2021*. Progress made in bringing government services to the doorsteps of citizen is probably the area where Bangladesh registered most significant progress due to Access to Information (a2i) programme. Vertical (with government ministries and agencies) and horizontal (i.e. with citizens) policy advocacy and development interventions of a2i programme have resulted in a number of citizen-centric e-initiatives and services. The objective of a2i is to make better use of technology to benefit underserved communities, which would increase transparency, improve governance and reduce the hassle of obtaining government services for citizens in Bangladesh. The objective of in-depth monitoring of a2i is to monitor the project in all aspects in collaboration with project personnel and other stakeholders. Stakeholders gave emphasis to include new areas like health, judiciary, land reform, food safety and police services under the purview of a2i. This paper focuses on impact of a2i programme on the society and recommendations proposed based on findings of the in-depth monitoring of a2i programme.

Keywords: Access to Information, e-Services

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Reka bentuk Pembangunan Perisian Hafazan Al-Quran (EzHifz) berasaskan gaya pembelajaran VARK

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ABSTRAK

Kajian ini bertujuan mengemukakan reka bentuk pembangunan perisian hafazan al-Quran (EzHifz) yang menyokong penggunaan kepelbagaian pancaindera dalam pengaplikasian gaya pembelajaran VARK dalam perisian. Perisian yang dibangunkan secara mudah alih menggunakan platform android ini membenarkan pemilihan mod gaya pembelajaran VARK berdasarkan gaya pembelajaran dominan dalam mengatasi perbezaan gaya pembelajaran pelajar. Berdasarkan hasil pengujian alpha dan beta, dapat disimpulkan bahawa perisian ini telah memenuhi ciri-ciri yang diperlukan dalam proses hafazan dan kefahaman Al-Quran serta keperluan pengguna dalam pembelajaran hafazan Al-Qur'an (Per kata).

Kata kunci: perisian hafazan al-Quran, gaya pembelajaran VARK, kepelbagaian pancaindera

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Kajian Awal Penggunaan Perisian Pengecaman Suara

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ABSTRAK

Perisian pengecaman suara ini direka untuk membolehkan pengguna komputer memberi input, menentukan teks, dan melaksanakan hampir semua fungsi komputer dengan bercakap menggunakan mikrofon (David J. Bertuca, 2000). Perisian pengecaman suara telah diguna pakai dalam pelbagai medium dan sektor industri. Kertas kerja ini bertujuan membandingkan jenis perisian pengecaman suara dan medium yang menggunakan perisian pengecaman suara. Di akhir kajian, perisian pengecaman suara yang bersesuaian akan untuk setiap medium akan dikenalpasti dan dibincangkan dengan terperinci.

Kata kunci: Perisian, Pengecaman Suara

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Keperluan Analisa Awal Aplikasi Mudah Alih Murojaah Al-Quran

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ABSTRAK

Perkembangan teknologi telefon pintar banyak memberi impak kepada terhasilnya pelbagai aplikasi yang menjurus kepada nilai-nilai Islam. Aplikasi-aplikasi yang berbentuk Islamik ini banyak memberi kemudahan kepada umat Islam secara amnya. Sebagai contoh aplikasi Al-Quran, Ratib Al-Attas, Al-Mathurat, Murojaah Al-Quran dan banyak lagi. Pada masa kini ini, tahap kesedaran masyarakat untuk mendekati diri kepada Tuhan semakin tinggi, sehingga muncul pelbagai aplikasi yang membantu masyarakat agar dapat menghafalkan Al-Quran melalui aplikasi Murojaah Al-Quran. Kertas kerja ini bertujuan untuk mengenalpasti keperluan awal fungsi-fungsi penting dalam aplikasi Murojaah Al-Quran. Tiga aplikasi sediaada dikenalpasti sebagai kayu ukur kepada sistem yang akan dibangunkan. Seterusnya konseptual modul kepada pembangunan aplikasi ini dicadangkan bagi membantu proses pembangunan aplikasi pada masa hadapan.

Kata kunci: Aplikasi Mudah Alih, Murojaah Al-Quran

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Kajian Tahap Kesedaran Ibu Bapa Terhadap Perkembangan Kartun Animasi Islam Di Malaysia

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ABSTRAK

Kajian ini bertujuan mengenalpasti tahap kesedaran ibu bapa terhadap perkembangan kartun animasi Islam di Malaysia. Tiga faktor telah diberi penekanan dalam kajian ini iaitu pengetahuan dan kesedaran ibu bapa tentang produk animasi Islam, prospek pasaran dan mengenalpasti minat ibu bapa terhadap kandungan yang dimuatkan dalam kartun animasi. Borang soal selidik telah diedarkan kepada responden yang merupakan ibu bapa. Data dianalisis menggunakan perisian “*Statistical Package for Social Science (SPSS)*” versi 16.0. Hasil kajian menunjukkan hubungan antara pembolehubah bersandar iaitu kartun Animasi Islam dan terhadap pembolehubah tidak bersandar iaitu pengetahuan dan kesedaran, prospek pasaran dan minat. Kajian ini akan menjadi input kepada pembangunan kartun animasi Genius Amin yang mengandungi nilai-nilai Islam.

Kata kunci: animasi, kartun, kandungan Islamik, kartun Islamik, kesedaran animasi Islam

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Analisis Faktor-Faktor Yang Mempengaruhi Minat Terhadap Watak Kartun Animasi Oleh Penonton Di Malaysia

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ABSTRAK

Perkembangan animasi di Malaysia menunjukkan pertumbuhan positif. Semakin banyak rancangan animasi tempatan tersiar di kaca televisyen menerusi saluran TV1, TV2, TV3, TV9, Astro Ceria dan Disney Channel. Animasi tempatan memaparkan budaya dan kehidupan masyarakat Malaysia yang berbilang kaum dan agama, disulami dengan mesej-mesej tertentu. Projek ini telah dijalankan di bawah Geran Penyelidikan Inovasi KUIS Fasa I 2016 selama setahun, bertajuk “Genius Amin”. Kajian ini bertujuan mengenalpasti faktor-faktor yang mempengaruhi minat terhadap watak kartun animasi oleh penonton di Malaysia. Lima faktor telah diberi penekanan dalam kajian ini iaitu nilai-nilai dalam karektor, personaliti watak kartun animasi, ciri-ciri fizikal watak kartun animasi, pilihan bahasa dan keistimewaan atau kelebihan watak kartun animasi. Sebanyak 100 borang soal selidik telah diedarkan kepada responden yang terdiri daripada pelajar sekolah rendah, pelajar sekolah menengah, pelajar IPT sehingga ke peringkat dewasa. Minimum umur responden yang ditetapkan untuk kajian ini ialah 12 tahun. Kajian menggunakan kaedah penyelidikan kuantitatif secara edaran borang selidik dan analisis kajian dibuat menggunakan perisian SPSS versi 6. Hasil kajian akan menunjukkan hubungan antara pembolehubah bersandar iaitu minat terhadap watak kartun animasi dengan pembolehubah tidak bersandar iaitu nilai-nilai dalam karektor, personaliti watak kartun animasi, ciri-ciri fizikal watak kartun animasi, pilihan bahasa dan keistimewaan atau kelebihan watak kartun animasi. Hasil kajian dalam bentuk analisis soal selidik akan digunakan untuk melahirkan watak animasi “Genius Amin” yang membawa perwatakan dan jalan cerita yang mempunyai nilai atau mesej yang ingin diketengahkan kepada masyarakat.

Kata kunci: watak animasi; kartun; nilai karektor; personaliti watak kartun; fizikal watak kartun; keistimewaan watak kartun; kelebihan watak kartun

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3rd INTERNATIONAL CONFERENCES ON INFORMATION TECHNOLOGY & SOCIETY 2017

Pengenalan dan Penggunaan Penvisualan

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ABSTRAK

Penvisualan merupakan proses menggambarkan data atau maklumat abstrak melalui penggunaan sistem teknologi komputer dalam bentuk visual atau imej agar lebih mudah difahami oleh pengguna. Seiring dengan perkembangan sains dan teknologi, penggunaan kaedah penvisualan telah banyak digunakan dalam bidang pendidikan, perubatan, sains, kejuruteraan, multimedia, rangkaian dan perniagaan sebagai medium penyampaian dan penyimpanan maklumat secara meluas. Pemaparan maklumat dalam bentuk visual adalah lebih mudah untuk ditafsirkan, diingat dan difahami merupakan salah satu tujuan penvisualan. Kertas kerja ini ditulis mengenai penvisualan dari segi takrifan, proses asas, beberapa tujuan penggunaannya dalam menyampaikan maklumat.

Kata kunci: penvisualan, maklumat, visual

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The Basics of Gamification: Case Study of FSTM Students

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ABSTRACT

The trend of employing game features into non-game contexts or gamification has increased in recent years. Gamification has the potential to be a new paradigm in enhancing online user engagement in the education system. This paper discusses a number of issues relevant to gamification. The first section introduces gamification in terms of its motivation and challenges, the how and why gamification became the hype among gen Y or millennial learners with the use of Flow Theory. The first section is finalized with the discussion of the two building blocks of gamification; game mechanics and game dynamics. The second section discussed the case study done to investigate the students' perception along with their habits of online game usage. Finally, the paper concludes with a brief section that proposed the use of gamification as an education tool. This section also argues the need for further studies involving gamification before being implemented.

Keywords: Education, gamification, game mechanics, game dynamics

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Pengurusan E-Sisa & Komuniti: Cadangan Rangka Kerja Sistem Pengurusan E-Sisa Komuniti KUIS

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ABSTRAK

Peningkatan penjualan dan penggunaan barangan elektrik dan elektronik kini, amaun e-sisa meningkat sebanyak 60 juta setiap tahun di seluruh dunia. Justeru, barangan elektrik dan elektronik menjadi luput sebaik sahaja model baru diperkenalkan di pasaran. Barangan yang rosak atau tidak digunakan lagi perlu dilupuskan dengan betul bagi mengelakkan pencemaran alam. Pengurusan e-sisa menjadi cabaran besar utama setiap negara termasuk Malaysia. Pembuangan e-sisa yang tidak terkawal dan sambal lewa boleh memudaratkan kesihatan manusia dan alam sekitar. Berdasarkan permasalahan ini, kajian dijalankan untuk mengetahui amalan pembuangan e-sisa di kalangan komuniti. Kajian mengambil tempat di Kolej Universiti Islam Antarabangsa Selangor. Hasil dari kajian ini, satu cadangan rangka kerja sistem pengurusan e-sisa akan dicadangkan bertujuan mendidik dan menggalakkan masyarakat tentang amalan pembuangan e-sisa yang betul. Sistem pengurusan e-sisa ini diharap dapat meningkatkan kesedaran di kalangan masyarakat dalam menjaga dan memelihara kebersihan alam sekitar bumi Malaysia..

Kata kunci: E-Sisa, Elektrik dan Elektronik, Pengurusan, Pelupusan, Sistem

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Design of a Microcontroller Based RF Remote Control for Stepper Motor Control

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ABSTRACT

This research is about producing an embedded system to test various functionalities of a dc stepper motor. The principal purpose is to control the direction and speed of the stepper motor. The complete hardware system separated into two different parts. First is the transmitter section, and the second side is the receiver section. The transmitter consists of PC, a microcontroller, an encoder, and radio frequency transmitter. For the receiver, there is a radio frequency receiver, a decoder, a microcontroller, a motor driver and a stepper motor. During this research, a wireless concept has been used to improve the stepper motor control. By using this system, the operator can control the operation of the stepper motor controller from a workstation. It also can control the direction of the stepper motor either forward or reverse. GUI application interface has been set up to improve the control of the devices. The interface system is controlled via the computer. The control signal data is sent and received via radio frequency sequentially.

Keywords: Wireless, stepper motor, microcontroller

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Histogram-based Threshold Selection of Retinal Feature for Image Registration

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ABSTRACT

Retinal image registration is performed to align two or more retinal images for super-resolution, image mosaicking and longitudinal study applications to assist diagnosis and monitoring retinal diseases. In fundus retina image, local feature such as Scale Invariant Feature Transform (SIFT) with illumination invariant Difference of Gaussian (*iiDoG*) operator is stable and capable of detecting keypoints from non-uniform image. However, *iiDoG*-SIFT detects keypoints along the vessels and on the background. Estimating geometrical transformation based on background keypoints can lead to inaccurate registration. Therefore, we introduce a histogram-based threshold selection computed from grayscale pixels of 9x9 patch to select keypoints along the vessels. The threshold selection is determined based on standard deviation of the histogram to exclude keypoints on the background while preserving keypoints along the vessels. The proposed method is tested in registering 134 retinal image pairs from Fundus Image Registration Dataset (FIRE) that consists of super-resolution, image mosaicking and longitudinal study applications. There are two main aspects evaluated during the experiment namely, success rate (%) and target registration error (TRE) of the successful registration. The experimental results show that the proposed method successfully registered 100% of retinal images in super-resolution application with mean TRE of 1.796 pixels, 86% in longitudinal study application with mean TRE of 5.161 pixels and 45% in image mosaicking application with mean TRE of 12.565 pixels. Furthermore, the comparative experiment is performed with GDB-ICP, Harris-PIIFD and H-M. The success rate and percentage of accurate registration of the proposed method outperformed others in super-resolution and longitudinal applications.

Keywords: Feature-based registration, fundus retinal image, local feature

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Kepentingan Perisian dalam Penghasilan Produk Animasi Dua Dimensi (2D): Analisis ke atas Toon Boom Harmony dan Adobe Animate CC.

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ABSTRAK

Animasi mempunyai peranan yang berbeza dalam bidang-bidang seperti pendidikan, hiburan, khidmat sosial, pengiklanan dan sebagainya. Ia menjadi salah satu medium utama dalam menyampaikan maklumat di era digital ini. Di dalam pendidikan, ia berfungsi sebagai medium untuk membantu menambah kefahaman tentang sesuatu proses. Betrancourt (2005) dalam buku beliau menegaskan bahawa dengan adanya animasi, pelajar dapat memahami ilmu atau konsep yang dipelajari dengan lebih baik. Dalam industri hiburan, ia menjadi medium yang dapat menarik penonton untuk mengikuti sesuatu episod hingga selesai. Hasil dari watak-watak yang dihasilkan dalam animasi, ia dapat menjana pendapatan melalui penjualan barangan (*merchandise*) yang berbagai bentuk. Dari aspek pengiklanan, ia dapat membantu malariskan produk. Ia dapat menyampaikan sesuatu idea yang bersifat fantasi tanpa ada kekangan berbanding dengan menggunakan lakonan orang hidup. Apabila watak animasi sudah popular, ia dapat membantu memberi mesej khidmat sosial kepada orang ramai yang lebih terkesan dengan penampilan watak yang mereka kenali. Kepentingan animasi tidak dapat dipertikaikan lagi dalam memberi maklumat tentang sesuatu perkara. Animasi dua dimensi (2D) dihasilkan dengan kaedah yang berbeza berbanding dengan animasi tiga dimensi. Ia memerlukan kepada kepakaran melakar dan menyusun babak dalam cerita. Animasi yang dihasilkan melalui kaedah tradisional juga tergolong dalam kategori 2D. Pada masa kini, untuk menghasilkan produk animasi 2D, terdapat banyak perisian di pasaran. Antaranya ialah Toon Boom Harmony, Moho (Anime Studio), Animate CC dan lain-lain. Setiap perisian ini mempunyai kemampuan yang berbeza. Terdapat lebih daripada 130 negara di dunia menggunakan Toon Boom sebagai perisian pilihan. Ini termasuk syarikat animasi yang terkenal seperti Walt Disney Animation Studios, Pixar, Cartoon Network dan Warner Bros. Di Malaysia, syarikat seperti Sead Studio juga membangunkan produk mereka yang bertajuk *The Amazing Awing Khenit* dengan menggunakan perisian ini. Begitu juga produksi Inspidea yang menghasilkan animasi *Boo & Me* dan *Mustang Mama*. Animate CC pula merupakan kelahiran semula Adobe Flash yang pernah menjadi pilihan utama dalam penghasilan kerja kursus (*courseware*) di Malaysia. Versi terkini ialah Animate CC 2017 yang mempunyai keupayaan untuk menghasilkan animasi, bukan sekadar untuk kerja kursus dan laman web malah ia boleh dieksport dalam bentuk video definisi tinggi (HD) untuk tayangan di televisyen. Prosiding ini menerangkan tentang kemampuan perisian Toon Boom dan Animate CC dalam pembangunan produk animasi 2D. Ciri-ciri yang terkandung dalam perisian tersebut yang merangkumi aspek teknikal dan spesifikasi akan disenaraikan untuk memberi maklumat kepada pengguna mengenai kelebihan dan kelemahan yang ada.

Hasil dari tulisan ini diharap dapat dijadikan rujukan kepada mereka yang ingin menceburi bidang animasi 2D agar dapat membuat pilihan yang tepat dan bersesuaian dengan objektif penghasilan kandungan kreatif mereka.

Kata kunci: Animasi, Perisian Animasi 2D, Toon Boom Harmony, Animate CC.

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Pembangunan Komik Digital : Hadiah

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ABSTRAK

Capaian atau pembacaan komik digital di dalam talian telah mendapat permintaan yang tinggi di kalangan penggemar komik digital. Penyampaian sesuatu jalan cerita dinyatakan dalam bentuk imej, grafik, gabungan dengan teks atau maklumat visual lain. Sehubungan dengan itu, kajian ini bertujuan untuk membincangkan pembangunan interaktif komik digital yang bertajuk Hadiah. Hadiah merupakan satu kisah perjalanan keinsafan seorang jejaka bernama Afi yang mencari sinar baru dalam kehidupan selepas terjebak dengan LGBT iaitu gay. Digital komik ini direkabentuk dengan menggunakan beberapa perisian pilihan seperti Paint Tool Sai, Adobe Photoshop, Adobe Flash, Audacity Sound Editor dan Format Factory. Disamping itu, pembangunan digital komik ini serta berasaskan model reka bentuk pengajaran ADDIE yang mempunyai lima fasa iaitu fasa analisis, fasa reka bentuk, fasa pembangunan, fasa pelaksanaan dan fasa penilaian. Dengan terhasilnya kertas cadangan komik digital ini dapat memberi pendedahan awal kepada pelajar, pendidik dan penggemar komik digital mengetahui proses awal pembangunan komik digital serta perisian dan perkakasan yang digunakan.

Kata kunci: Komik digital, hadiah, perisian dan perkakasan

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Overview on Network Simulation Tool

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ABSTRACT

Conducting a study of a network in the real world is very difficult. This is because in the network there are various network devices, routers, compilers, and data links to authenticate and confirm certain network protocols. It also involves certain network algorithms that require a large amount of time and cost. Simulators can help network developers to check whether the networks work properly in the real world. Therefore, time and cost to test network functions can be reduced and the implementation becomes easy. The network simulator is also very useful especially in testing a new network protocol or to change it. The existing protocol is in a controlled and manageable way. This paper discusses different types of network simulators and discusses the main features of each simulator including its advantages and disadvantages. The results of this study are expected to help network developers in choosing the right network simulator for them.

Keywords: Network Simulation, Network Simulator, Open-Source Technology, OPNET, NS2, NS3, OMNeT++, J-Sim

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A New Comprehensive B2C Model Based on Trust Requirements

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ABSTRACT

Developing a B2C e-commerce trust model is ever-demanding. Absolute secrecy and trust for e-commerce is prerequisite to protect online shopper from being a victim of cyber-scam. Yet, the global impact of the e-commerce is limited due to lack of consumer trust. Saudi Arabia being a major contributor to global economy must explore the potential of e-commerce. However, the advancement and successful implementation of the trust model up to consumers' expectation needs the identification of essential requirements or major influencing factors of reliance. In the context of Saudi Arabia, we identified eight trust requirements that affect the B2C e-commerce in Saudi Arabia. A new model is proposed by incorporating these trust factors and requirements in the existing B2C framework. These B2C e-commerce trust factors are divided into governmental non-governmental categories. It is demonstrated that the cited trust requirements are essential to establish an efficient online business strategy in the Kingdom. Flexible government policies, legislation, rules, protection of consumer rights, and banking network system with less internet fees are pre-requisite for e-commerce expansion. Implementation of the proposed model is believed to augment the consumer self-confidence and reliance which in turn may assist the growth of e-commerce in Saudi Arabia.

Keywords: Electronic commerce, Trust Model

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CLogVis: Crime Data Analysis and Visualization Tool

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ABSTRACT

Recently, cell phone usage has increased incrementally to huge numbers. Statistics show that a total number of mobile phone users worldwide, from 2013 to 2019, is about 60 percent of the Earth's population. This reflects that the use of cell phones is the traditional way of communicating for most of the people in the world. Making calls and sending text messages are the main methods of communication used with cell phones. The purpose of this work is to present "CLogVis," a crime data analysis and visualization system that helps police departments and security agencies connect criminals and suspects by using their cell phone data. Cell phones contain a huge amount of information that helps agencies and police departments in various ways find relationships and connections between criminals. Moreover, information in cell phones will expand in an incremental way when the suspect uses the Internet through their cell phone. In our system, we will be looking to build relationships and connections between criminals by using phonebooks and call history (inbound and outbound) to find the relationships between suspects. Regarding the nature of crime organizations, which are built on networks, graph techniques are used to build connections throughout datasets gathered from arrested suspects, criminals, and Telecommunications Service Provider (TSP) log files.

Keywords: Forensics, Crimes Data Analysis, Graph Theory

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Automated Framework of White Blood Cell (WBC) Detection and Counting in Blood Smear Images

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ABSTRACT

White blood cells (WBCs) are useful for attacking bacteria and viruses that invade the body. The WBC detection and counting in blood smeared image is crucial to diagnose hidden infections and body medical condition such as anemia and leukemia. Manual finding of white blood cell is a challenging task since there are more than thousands of cells exist in the blood sample, which not only white blood cell but also constitute to other particles such as red blood cell, platelet and various immune system. To overcome this problem, an image processing framework is proposed to automatically detect and subsequently identify the white blood cell regions in blood smeared image. Initially, color correction based on $L^*a^*b^*$ color space is applied to the input image to determine a consistent color level. Next, the white blood cell region was extracted based on analysis combination of HSV, CMYK and OTSU segmentation. Noise as a result of segmentation process is abolished by manipulating morphological filter. Following that, the WBC number is predicted by using Circle Hough Transform (CHT) in the segmented region. Performance of the whole system is observed using IDB database and it is found that the proposed framework of WBC segmentation can give an average accuracy of 98.52% while the average of counting performance is 92.16%.

Keywords: White Blood Cell, Colour Space Analysis, Hough Transform

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**Framework for Online Business Transaction using Instant Messaging with
Text Based Information Retrieval and Business Ontology**

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ABSTRACT

Instant messaging (IM) has become a popular way to communicate with clients and customers. IM is a natural way for businesses to provide real-time services to customers. It adds a flexible and comforting human element to an otherwise automated process. Nonetheless, online business activities using IM involve a lot of repetitive and redundant tasks. In addition, current IMs only allow information sharing without any business transactions functionalities. Manually managing business on IM is highly time consuming. At present, there are no framework available for automated online business transactions utilizing IM. The objective of this study is to propose a framework for online business transactions such as product information, inventory and order process via automated IM. The system uses text based information retrieval and collected database. A prototype will be developed based on the proposed framework. The proposed approach is expected to serve as an automated customer service consultant that will enable fast and efficient online business transactions.

Keywords: Instant messaging, Virtual assistant, Natural Language Processing, Text-Based Information Retrieval

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Lower Limb Walking Gait Profiling using Marker-less Motion Capture to assist Physiotherapy Treatment

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ABSTRACT

Physiotherapy involves specialised therapist conducting mechanical force and movement onto human body in order to heal and avoid further physical injuries. Therapists rely on subjective estimation in order to measure the performance improvements after physiotherapy treatments. An automated method to analyse and measure improvement is needed to calculate improvements based on patients' walking gait. This method would require a gait profile database in order to be able to calculate patients' improvement after physiotherapy treatments. The aims of this research are to develop a framework for walking gait profiling using marker-less motion capture and assist physiotherapy evaluation by comparing walking gait to the profile that has been generated. The proposed system consists of four major phases which are: motion capturing; motion profiling; normal gait averaging; and gait profile comparison. The framework that has been developed in this research is shown and discussed in detail in this paper.

Keywords: walking gait, physiotherapy, marker-less, motion capture, profiling

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A Proposed Framework for Automated Online Question and Answering System for Interview using Latent Semantic Analysis

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ABSTRACT

Interview is an important process to select the best applicant during employee selection process for a company, student enrollment in university and others. The interview process is conducted to find out more about respondent knowledge, personality and background. Interview can be conducted by face to face interview session or online interview session. Online interview session can be structured or unstructured Question and Answer (Q&A). Online interview tends to use structured Q&A where candidates are not given a chance to reveal their knowledge. Because of limitations in the structured online interview, unstructured online interviews started being used by many organizations. However, using unstructured online interviews, it is difficult to determine accuracy of comparing the answer. In this research, we proposed a framework for automated online interview system using Latent Semantic Analysis (LSA) to evaluate the answer. This research will use Natural Language Processing techniques to pre-process the answer and LSA to evaluate the answer. Further in this study, the result of this process will be evaluated and compared with the expert evaluation to grade the answer.

Keywords: Unstructured Question & Answering, Natural Language Processing (NLP), Latent Semantic Analysis (LSA)

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Development and Implementation of Visual Odometry System using Quadcopter for Inventory Maintenance

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ABSTRACT

There is a growing interest in the design of aerial vehicles with advanced autonomous capabilities and many have already found their way into military and civil applications. However, while the focus has been on the development of these outdoor vehicles, little attention has been given to Unmanned Aerial Vehicles (UAVs) in indoor environments. Such aerial robots would be valuable for indoor surveillance, bomb disposal, personal assistive devices, or stock counting, which is the focus of our work. We present a navigation system for an aerial robot that uses an optic flow-based vision system for its localization, making it suitable for cluttered urban and GPS-denied indoor environments. Stock counting (or inventory counting) is implemented by the placement and detection of ArUco Markers on individual packages. The system is implemented on a quadrotor with all the computations performed on-board, and its experimental results are presented.

Keywords: Image processing, robotics, unmanned aerial vehicles, inventory counting

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**Framework for Online Business Transaction using Instant Messaging with
Text Based Information Retrieval and Business Ontology**

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ABSTRACT

Instant messaging (IM) has become a popular way to communicate with clients and customers. IM is a natural way for businesses to provide real-time services to customers. It adds a flexible and comforting human element to an otherwise automated process. Nonetheless, online business activities using IM involve a lot of repetitive and redundant tasks. In addition, current IMs only allow information sharing without any business transactions functionalities. Manually managing business on IM is highly time consuming. At present, there are no framework available for automated online business transactions utilizing IM. The objective of this study is to propose a framework for online business transactions such as product information, inventory and order process via automated IM. The system uses text based information retrieval and collected database. A prototype will be developed based on the proposed framework. The proposed approach is expected to serve as an automated customer service consultant that will enable fast and efficient online business transactions.

Keywords: Instant messaging, virtual assistant, Natural Language Processing, Text-Based Information Retrieval

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Machine Learning in Progressive Enemy Artificial Intelligence

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ABSTRACT

The goal of this paper is to explain and apply a machine learning algorithm in a game. Using JavaScript and HTML, the proponents would apply the selected algorithm to create a simple game with Artificial Intelligence. The paper focuses on creating a shooter game with the player and different enemies entitled, “The Maze”. The game environment uses world generation to serve as barriers for the player and the AI controlled enemies. The enemies have semi-advanced AI that determines its behavior, it can both shoot the player and find the player using the A* algorithm. The player may “hide” while the enemy “seeks.” The player wins when all the enemies are destroyed. The player may also lose when they get hit by the enemy. In many computer games like chess, poker and in many competitive online games like Team Fortress and Alien Swarm, machine learning is applied throughout the programs. Enemy AI, Environmental Niche Modelling and World Generation, use different machine learning algorithms in order to function smoothly. The first part of the paper explains different machine learning algorithms used in many game development projects in the industry. Using multiple different examples and diagrams, the proponents would explain the connection between the algorithms and the output.

Keywords: Artificial Intelligence, Machine Learning, Game Development

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**Optimizing of the WAG Process Using Dynamic Proxy, Genetic Algorithm
and Ant Colony Optimization**

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ABSTRACT

Maximizing oil recovery is the challenge for the oil industry in the world wide. To achieve this target, a number of enhanced oil recovery technologies are being applied, and one of the most successful and used method is water alternating gas injection (WAG). The estimation of the optimal design parameters of the WAG process is a complex problem which requires a significant number of numerical simulations that are time consuming. Therefore, developing a replacing tool (faster and its precision is close to those of the numerical simulators) becomes more and more essential. Proxy models that are lighter mathematical models based on response surface have the characteristic of the identification of the highly complex and non-straight-forward problems such the answers or the outputs of the numerical simulators in brief deadlines. Different static proxy models have been used to-date, where a pre-defined functional is used to reproduce the outputs of the numerical simulator (generally, an objective function is chosen such FOPT or NPV) at a given time and they are not valid for other times. This study demonstrates the application of time-dependent multi Artificial Neural Networks as a dynamic proxy model for the study and the optimization of a WAG process in a synthetic field. LHD is used to select the database points employed in the construction of the proxy. After setting up the proxy model, it was introduced to a global optimization search using genetic algorithm (GA) and ant colony optimization (ACO) to find the optimum WAG parameters such: gas injection rate, water injection rate, gas & water injection half cycle, the downtime process and the WAG ratio, that maximize the FOPT, subject to some time-depending constrains. The results show that the established proxy is found to be practical and efficient alternative for mimicking the performance of numerical reservoir models in the study and the optimization of the WAG process. Both GA and ACO are strongly shown to be highly effective in optimizing the combinatorial WAG process.

Keywords: WAG process, dynamic proxy, Artificial Neural Network, global optimization, Genetic algorithm, Ant Colony Optimization

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GIS for Soil Nutrient Mapping: Sites Batu 17, Yan, Kedah

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ABSTRACT

Geographic information systems (GIS) play a vital role in creating, collecting, managing, and visualizing georeferenced data. The general objective of this research project was to produce an up-to-date map showing the soil fertility status in paddy field especially Nitrogen, Phosphorus and Potassium (NPK) variability in a paddy field using geostatistical and interpolation technique in QGIS. This study was carried out in a paddy field at Batu 17, Yan, Kedah, Malaysia. In order to update soil information, 96 soil samples were collected and were analyzed for NPK content were analysed in the chemical laboratory. These maps can be used to guide the development, implementation of integrated soil fertility management strategies and farmers can achieve additional benefits by combining better utilization of fertilizer.

Keywords: GIS, soil nutrient, geostatistical

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A Framework for Social Network Analytics and Its Applications

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ABSTRACT

Social media has become the popular means for people to freely share information, express and discuss their opinions and feelings on events happening around the world. Given the massive volume and variety of social data sources, it is very important to create intelligence from the public data available from social networking sites and content websites. This paper presents a framework to crawl and harvest unstructured data from multiple sources (including social networking sites, content websites and Linked Open Data), extract relevant information from those variety sources to build a social network of how people are related and interact with others, and then perform intelligent analytics to create insights necessary for information-driven business decisions. The paper also discusses the impacts of this social network analytics framework on various business areas.

Keywords: Social Network Analytics, Intelligent System

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Social Media Strategic Influence in Choice of Tourism Destination (Case Study at Jatiluwih Tourism Village in Tabanan Regency Bali Province)

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ABSTRACT

This research which located at Jatiluwih World Heritage Culture are focused to problem of social media influenced as choice of vacation in tourism destination. According this research, that there are significant different between domestic tourist and foreign tourist in order to use social media as preference tourism destination choice. Domestic tourist not impacted by social media in choice of tourism destination, however foreign tourist impacted by social media in choice of tourism destination for vacation motivation.

Keywords: world heritage culture, social media, tourism destination

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Enriching Information Technology Course Materials by using YouTube

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ABSTRACT

IT offers some benefits and collaborations in various sectors. This research focuses on exploring higher education subjects via social technology, YouTube. YouTube is the world largest video based contents application in the world. Current learning materials are not only in text and images, but included video contents. This research enriching students learning materials may involving YouTube as learning sources. The study observed 118 sophomore students in computer science faculty. The results show that, involving YouTube in enriching students course material able to create conducive learning environment. Increasing students' understanding in their field of study.

Keywords: Social Technology, Social Media, YouTube, SCM

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Framework for Online Business Transactions via Instant Messaging using Natural Language Processing and Business Ontology

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ABSTRACT

Instant messaging (IM) has become a popular way to communicate with clients and customers in the business world. IM is a natural way for businesses to provide real-time services to customers. It adds a flexible and comforting human element to an otherwise automated process. Nevertheless, online business activities using IM involve a lot of repetitive and redundant tasks. Current IMs only allow information sharing without any business transactions functionalities. Manually managing business on IM is highly time consuming. At present, there are no framework available for automated online business transactions utilizing IM. The objective of this study is to propose a framework for online business transactions such as product information, inventory, and order process via automated IM called Virtual Assistant (VA). The system uses Natural Language Processing and collected database. A prototype will be developed based on the proposed framework. It is anticipated that the proposed approach will serve as an automated customer service consultant that will enable fast and efficient online business transactions.

Keywords: Instant messaging, Virtual Assistant, Natural Language Processing, Business Ontology

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System and Method to profile Muslim Prayer (Solat) Performance

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ABSTRACT

Islam is the way of life. For a Muslim 5-daily prayers formed the central and integral aspects. After syahadah in the Pillars of Islam, pray is the next important list in Muslim's life. Prays invitation or known as azan will be propagated by a person that called Bilal. Bilal will propagated Azan 5 times in daily. Its means 5 daily prayer are compulsory for muslim's to perform the Solat. In every country, 5 daily solat performed are related to the movement of the sun. Firstly, Solat Fajr or Subuh with 2 raka'at should be performed at least 10-15 minutes before sunrise. Secondly, Solat Dzuhur should be perform between true noon until Solat 'Asr prayer, there are 4 raka'at. Thirdly, Solat 'Asr should be perform between afternoons till sunset, there are 4 raka'at. Fourthly, Solat Maghrib should be perform between sunset till dusk, there are 3 raka'at. Fifthly, Solat 'Isya from dusk till dawn, there are 4 raka'at. All shalat that performed need facing the direction of the Qiblat (Ka'abah in Mecca). In Solat have an action that need to care which is how much solat that need to perform, how much rukuk need to perform to completely the raka'at. As example for Solat Subuh need 2 times rukuk and 4 times sujud to complete 2 raka'at of solat. The contribution of this research is we overcome a system and method to profile muslim prayer (solat) performance. In this paper will elaborate more on concept on how to quantified prayer performance, to profiling prayer activity and on how to reporting prayer performance.

Keywords: Prayer Performance, Profiling Prayer, Reporting Prayer

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Magnitude of Difference (MDV) Between Target Vector and Trial Vector in AncDE and Standard Differential Evolution

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ABSTRACT

This paper describes an ancestral extension to the standard Differential Evolution algorithm called AncDE and attempts to explain why its ancestral cache helps improve performance. We compute the magnitude difference between the target vector and the trial vector for each generation for DE and AncDE. Results for 6 problems are used in this study. Our findings indicate that ancestors can help overcome some of the local variation in solutions quality and improve solution quality by improving population diversity.

Keywords: Ancestor template, Differential evolution, Magnitude difference vector

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A survey of the Top Twenty Risks factors in Software development projects in Saudi Arabia

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ABSTRACT

Risk factors and management have always been an important topic in the success of software development project. Risk identification, analysis and ranking of those factors is a critical element that should be taken into account for the rise and success of software project. Although, there are several reviews about the risk management of software development project, there is little information about the most important factors that face the software project especially within middle east countries i.e. Saudi Arabia. This paper extract attempts to illustrate the most important risk factors with reference to recent published literature. Furthermore, a survey conducted among 107 professionals within the field of software project has been sampled. In addition, statistical analysis was the main analysis tool adopted to identify the top factors. The paper results in identifying top 20 risk factors divided into three classes “Product engineering, Development environment and Program Constraints”.

Keywords: Risk factors, Software development project, Risk identification, Risk ranking, SEI taxonomy, Risk analysis and Risk management

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Mapping the Interaction between The risk, Success factors and Success criteria by using the network analysis in Software Development Projects

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ABSTRACT

Software development project are considered one riskiest projects. software projects have not gone up significantly compared to the amount of research that has worked to raise the success rate. Where it was observed that during previous years software projects were not completed on time, within the planned budget or in accordance with the specified quality. Complexity of interaction between the project constructs “risk, success factors and success criteria” could help one main reasons behind this failure. This paper explores the complexity of interaction between those components in order to provide the software project decision makers with useful information to build their plans to rise the success of software project.

Keywords: Complexity, Interactions, Mapping, Risk factors, Software development project; Centrality and Network Analysis

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