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1.

Authors: Bright Kwame Ameme, Ezer Osei Yeboah-Boateng

Paper Title: Internet Banking Security Concerns: An Exploratory Study of Customer Behaviours based on Health Belief Model

Abstract: Internet banking is becoming increasingly important to banks in providing convenient banking services to customers. To attract and retain their customers, banks ensure security measures are put in place to protect the customers from various cyber attacks. Despite these security measures, customers are constantly being exposed to fraud and security issues. This paper therefore seeks to understand the reasons behind these security breaches and to develop a model to predict the behaviours of internet banking customers. Drawing on Health Belief Model, this paper employed chi-square and logistic regression analysis to specifically investigate internet banking security issues from human behavioural perspective. The study empirically revealed that there is a direct relationship between internet banking security breaches and customer behaviours. A predictive model was however developed to predict these human behaviours on internet banking platforms. The study concluded that internet banking security breaches are mainly due to human behaviours such as unlocking computers when not in use, installation of softwares from sources that are not trusted and supported, poor password management, and other related behaviours that could be prevented by customers. It was also concluded that there is no relationship between customers' age group and internet banking security breaches. It is therefore by chance that the younger respondents experience internet banking security issues more than the elderly. This chance could be attributed to the fact that the younger ones do not have valuable cash deposits to protect and hence not cautious in their behaviours on internet banking platforms. The findings of this study have important policy implications for banks, thereby helping to understanding the behaviour of customers on internet banking platforms. It is therefore recommended for banks to educate and organise regular and continuous security awareness programmes for their customers.

Keywords: Internet Banking, Behaviours, Security.

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2.

Authors: Abderrahmène SALLAMI, Nadia ZAZOURI, Mekki KSOURI

	Paper Title:	**New Diagnosis Method by Luenberger Observer Using Bond Graph Approach**	
	Abstract: The paper concerns the design of a new methodology for diagnosis by Luneberger Observer using the Bond Graph. The observer design provides a state estimated from the model and inputs and outputs measurements. Furthermore, we have exploited the architectural of the Bond Graph to generate the diagnostic condition based on Luenberger observers. Furthermore, the performance of the proposed diagnosis system is studied by these residuals to the certainties and faults. The research results have been applied to an industrial process RODS (Reverse Osmosis Desalination System) of Research and Technology Center of Energy Borj Cedria. In this context, the proposed method was operated from the modeling step to the diagnosis system step. **Keywords:** Diagnosis, Lunberger Observer, Bond Graph, Reverse Osmosis Desalination System **References:** 1. Basseville. M. Basseville, Benveniste, G et Moustakides. 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3.	**Authors:**	**P. Ugandhar Sainadh, Ch. Santhi Rani, P. Kusuma, T. Manogna, P. Mounika, V. Veeraiah chowdary**	
	Paper Title:	**Advanced Integrated Wireless Healthcare Monitoring**	
	Abstract: In rural areas and old age homes, the unhealthy persons need a constant monitoring of their body. In the present work the physiological parameters such as Heart beat, Body temperature, ECG, Smoke detection and brain tumor detection are obtained, processed and displayed in an android application. Monitoring and control of all the specified parameters are done using particular sensor for each parameter. These sensors are not harmful to human body as they are sensitive to infrared rays. If anyone of the vital parameter goes out of normal range then an alert message is generated and sent by the system via GSM/GPRS module to the authorized mobile numbers. Thus, it reduces the doctor's work and also gives reliable results. Whenever there is an abnormality felt by the patient, the	**17-19**

system will give an alarm signal, by which the patient can rush to the nearest hospital. Thus an expert-based health care can be provided at crucial circumstances. The accessibility of this android application is simple and easy. By using this application, we can say that, it is cost effective and user friendly. This system can detect the abnormal conditions, issue an alarm to the patient and send a SMS to the physician and or to the family members.

Keywords: Smart phone, Android application, GSM module, Wi-Fi module, ECG monitoring, Body Temperature, Heart rate, Brain tumor, Smoke detector.

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Authors:	**Chebii Paul, Munyendo Were, Kiprop Ambrose, Mitei Yulita Cheruiyot, Joseph Barmao**	
Paper Title:	**Density, Distillation, FT-IR and FIA for Rapid Determination of Adulterant Kerosene in Gasoline and Diesel**	

Abstract: Use of adulterated fuels has been escalating over the years due to lack of appropriate analytical tools for rapid detection resulting in detrimental effects to motor engines, environment and to the economy. Kerosene is a widespread adulterant added to gasoline and diesel. It is extensively used because of its financial gains and ease of blending. In this study attempt has been made to develop a combination analytical tool for rapid detection of kerosene adulteration by evaluating samples of gasoline and diesel; determining the adulteration intensity; compare detection limits of Fourier Transform Infrared (FTIR) and Fluorescent Indicator Adsorption (FIA); then evaluate detection aptitude of the methods. Ssuspected adulterated gasoline and diesel were collected systematically in sevenselected locations within Eldoret, Kenya. References were traced from Eldoret pipeline depot up to the shipper's dispensing station. Arrays of six blend mixtures of kerosene with either gasoline or diesel were prepared as custom proportions for comparison as adulteration contour. Density tests, fractional distillation, FIA and FTIR spectroscopy were carried out for characterization. Results showed appreciable density variation at different levels with the lowest density of 0.7373 and 0.8199 Kg/l obtained for gasoline and diesel respectively compared to 0.7374 and 0.8345 Kg/l for the standards which implied an element of adulteration. Fractional distillation provided appropriate indicator for adulteration as evident from the samples distillation end points of 234.0oC being a rise by 20.0oC for gasoline while 382.0oC for diesel being a fall of 4.0oC. FTIR provided preliminary qualitative data by peaks in the region 2950 – 3200cm-1 which varied in intensity with adulteration. FIA showed exhaustive results qualitatively as it was able to classify samples as olefins, saturates and aromatics. The study therefore fronts Density tests, Fractional distillation, and FTIR and FIA techniques for rapid determination of adulterant kerosene.

4.

Keywords: Density, Distillation, FIA, FTIR, Kerosene.

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5.

Authors: **Chandra Shekhar Mithlesh, Dolley Shukla, Manisha Sharma**

Paper Title: **Video to Image Conversion Techniques Video Frame Extraction**

Abstract: The video is electronic Media for broadcasting, watching, recording, advertising, sharing and displaying visible effect. A key component of the video is Image; the standard term for the image is the frame. A powerful application of video is indexing, summarization, browsing, online video database analysis these all need for converting the video into a number of the frame. This paper has given a technique for the video to frame extraction with the help of MATLAB platform. This project help today's demand like social media (WhatsApp and facebook), video lecture distribution, and surveillance system

Keywords: frame; group of picture; frame rate; video formate; video type; pixal; aspect ratio, digital and analog video, video resoluation.

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Authors: **Maritoni M. Alano, Joseph B. Olleres, Ma. Dolores R. Rico, Jettro A. Satsatin, Jonalyn M. Solomo, Roselito E. Tolentino**

	Paper Title:	**Mimicking the Movements of the Human Hand using Leap Motion Sensor for Different Users**	
	Abstract: The researchers considered the disadvantage of using a Cyber gloves sensor that was always needed a calibration for mimicking a robotic hand. It is simply because human hand dimensions are not standard. For every person that would use the glove to operate a teleportation, there would be a different hand configuration to be able to perform the various tasks. Individual calibration is needed because each human hand has his personal calibration. Therefore, the researchers use Leap Motion sensor with the aid of a professional, high-precision, and fast motion tracking system which is designed to be placed on a physical desktop, facing upward to track human hands and fingers and then the researchers employed vector dot product method for the algorithm in order to acquire data in controlling a robotic hand to mimic the movements of the human hand for different users. **Keywords:** Leap Motion sensor, Mimicking, Robotic hand, Scalar product **References:** 1. Naik, S. (2016). Depth Sensing Camera - A Comparative Study, 1(11), 1585-1590. 2. SG90 9g Micro Servo. Retrieved from http://www.micropik.com/PDF/SG90Servo.pdf 3. Sciuto, L.G. (2011). Robotic Hand and Sensorized Glove: A Calibration for Managing Robotic Grasp in Teleoperation. Tesi di laurea Universitỳ di Siena , facoltà di Ingegneria .W.-K. Chen, Linear Networks and Systems (Book style). Belmont, CA: Wadsworth, 1993, pp. 123–135.	**35-42**
7.	**Authors:**	**Juan Ochoa Aldeán, María E. Ochoa Azuero**	
	Paper Title:	**Implementation of Wireless Sensors Networks Wsn Based On the IEEE 802.15.4 (ZIGBEE) Standard in Botanical Gardens**	
	Abstract: This article describes the development and implementation of a Wireless Sensor Network WSN, in the Botanical Garden Reinaldo Espinosa owned by the National University of Loja. The simulator NS2 (Network Simulator V2 was used for this design, which allows to display the results of tests sending packages and power consumption, letting us analyze the advantages and disadvantages of each topology, thus we determined that the star topology is the best option when transmitting in real-time data provided by the sensor nodes. Through the simulation results we proceeded to implement a prototype WSN, based onXBee Pro S2B wireless communication modules, processing and energy units, and temperature and relative humidity sensor. Finally, weshow the data to the user with a graphical interface that enables real-time monitoring. **Keywords:** Wireless Sensor Networks, IEEE 802.15.4, NS-2, ZigBee. **References:** 1. S. Tanenbaum, Computer Networks, Prentice-Hall, 2003.3 Edición. 2. Redes De Computadoras un enfoque descendente, James F. Kurose 5 Edición. 3. Transmision por radio (7ª ed) Jose Hernando Rabanos; Luis Mendo Tomas; Jose Manuel Riera Salis , editorial universitaria ramon areces, 2013. 4. AKYILDIZ, I. AND VURAN, M., Wireless Sensor Networks (Advanced Texts In Communications And Networking)., 1a ed., New Jersey-EEUU., Ed. Mankrono Print Media., 2010., Pp. 413-502. 5. FALUDI, R.,Building Wireless Sensor Networks., 1a ed., New York-Estados Unidos., Ed. BRIAN., 2010., 320p 6. GISLASON, D.,Zigbee Wireless Networking., Washington- Estados Unidos., Ed. Elsevier., 2008., Pp.400-413 7. R. d. Computadoras, «Redes de Computadoras,» Marzo 2004. [En línea]. Available: http://www.uoc.edu/masters/oficiales/img/922.pdf. [Último acceso: 15 Marzo 2015]. 8. «Introduccion a las Redes,» [En línea]. Available: http://inech.weebly.com/uploads/1/2/6/2/12627663/redes.pdf. [Último acceso: 15 marzo 2015]. 9. J. R. Sánchez y H. M. V. Lendechy, «Las Redes Inalambricas,» Universidad Autonoma del Carmen, Septiembre-Octubre 2013. [En línea]. Available: http://www.unacar.mx/contenido/difusion/acalan55pdf/contenido.pdf. [Último acceso: 17 marzo 2015]. 10. J. Garbarino, «Protocolos para redes inalambricas de sensores,» 7 noviembre 2011. [En línea]. Available: http://materias.fi.uba.ar/7500/Garbarino.pdf. [Último acceso: 18 marzo 2015]. 11. S. R. M. Cantillo, «DESARROLLO DE APLICACIONES BASADAS EN WSN,» septiembre 2010. [En línea]. Available: https://riunet.upv.es/bitstream/handle/10251/8592/PFC%20-%20DESARROLLO%20DE%20APLICACIONES%20BASADAS%20EN%20WSN.pdf?sequence=1. [Último acceso: 20 marzo 2015]. 12. M. G. M. J. Moreno, «ZIGBEE,» 23 mayo 2012. [En lína]. Available: http://sx-de-tx.wikispaces.com/ZIGBEE. [Último acceso: abril 2015]. 13. L. R. P. Vasques y I. B. d. A. Coutinho, «ZIGBEE: Tipos de Dispositivos,» 2010. [En línea]. Available: http://www.gta.ufrj.br/grad/10_1/zigbee/dispositivos.html. [Último acceso: Abril 2015]. 14. J. Longares, «Introducción a Zigbee y las redes de sensores inalámbricas,» 7 Abril 2013. [En línea]. Available: http://www.javierlongares.com/arte-en-8-bits/introduccion-a-zigbee-y-las-redes-de-sensores-inalambricas/. [Último acceso: Abril 2015]. 15. E. A. B. Hernandez, «Red ZigBee mediante modulos XBee,» Bucaramanga, 2010.	**43-48**