2023

BOOK OF ABSTRACT

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INTRODUCTION

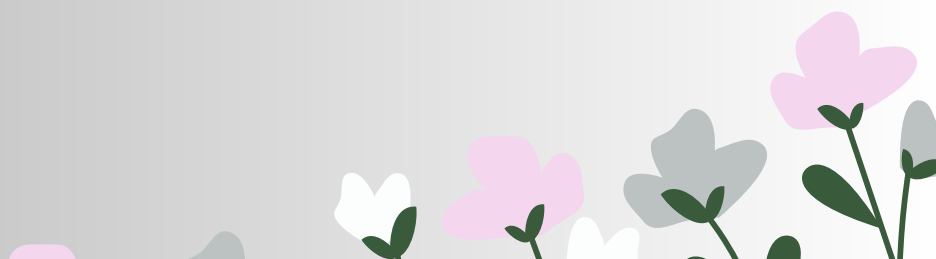Welcome to the collection of abstracts for the Journal and Proceedings 2023, showcasing the diverse and innovative research contributions of CETMA fellows. In this compendium, we present a synthesis of cutting-edge ideas, methodologies, and discoveries that exemplify the intellectual richness of our community. The abstracts encapsulate the interdisciplinary nature of research undertaken by CETMA members, spanning varies fields.

These succinct abstracts offer a glimpse into the forefront of knowledge, representing the collective efforts of our dedicated researchers. From fundamental explorations to applied solutions, each contribution contributes to the broader landscape of scientific inquiry. As we navigate the complexities of the modern research landscape, this compilation serves as a testament to the intellectual vigor and collaborative spirit within CETMA. We invite you to delve into these abstracts, appreciating the depth and breadth of research endeavors pursued by CETMA fellows in their pursuit of advancing knowledge and fostering innovation.

ARTICLE IN JOURNAL

A NEW FRAMEWORK ON SUCCESS FACTORS OF SOCIAL MEDIA APPLICATIONS USAGE

MAZLAN BIN MOHD SAPPRI, MOHAMAD SHUKRI BIN ABDUL HAMID, NOR INTAN SANIAH BINTI SULAIMAN, MOHD FAIZAL BIN OMAR

Based on many past studies regarding Social Media Applications (SMAs) rarely focus on aspects of continuous use and Perceived Privacy (PP). The increasing user awareness issue regarding PP in using SMA is escalating due to various cybersecurity threats, such as malware, software, password and Man-in-the-Middle (MitM) attacks. Accordingly, this study examines the effect of users' PP on System Quality (SQ), Information Quality (IQ), Service Quality (SVQ), User Satisfaction (US) and Usage (USG) based on the DeLone and McLean Information System (IS) Success Model. A total of 345 samples were used for this study using the convenience sampling approach and SmartPLS 3 as the analysis tool.

Based on the study's results, it was discovered that SVQ and IQ affect the use of SMA. In addition, it was discovered that PP affects the relationship between SQ, SVQ and the use of SMA. The analysis results related to PP reveal that it is a dominant construct in the study model. Note that the importance of PP should be a solid foundation for developing an SMA application. The PP component in this study can be used as a guide and checklist for software developers to improve security features and SVQ, which is a catalyst for US and ensure that an SMA application is used continuously.

JOURNAL OF COMPUTATIONAL INNOVATION AND ANALYTICS

WAQF IN MEDIEVAL ISLAM: AN OVERVIEW

MOHD ZAKHIRI BIN MD. NOR, ANI MUNIRAH BINTI MOHAMAD

Waqf terminology was not found indirectly in the Al-Quran. However, sadaqah is often associated with waqf, which refers to religious endowments, since Prophet Muhammad emphasised that Muslim deeds can be contributed continuously to receive reward from Allah. The key reason for the idea of waqf was to restore the roots to nature for the sake of Allah, which in this sense meant to support the poor and vulnerable people in society.

The aim of this paper is to look at the practise of waqf in mediaeval Islam and the position of cash waqf. In this article adopted the qualitative and content analysis method. This paper was successful in describing waqf, which is a structure distinct from Islamic states and other states in medieval Islam, and cash waqf was permitted during the Ottoman era. This paper is noteworthy because it demonstrated the popularity of the waqf paradigm in medieval Islam. Waqf clearly benefited the whole community.

RUSSIAN LAW
JOURNAL

A SURVEY OF DIGITAL LITERACY AMONG STUDENTS OF FOUNDATION STUDIES IN MANAGEMENT: A CASE STUDY IN PUBLIC HIGHER INSTITUTION MALAYSIA

ZAHAYU BINTI MD YUSOF, MASNITA BINTI MISIRAN @ BAKUN

The ability to navigate the digital world using reading, writing, technical skills, and critical thinking together with the ability to discover, evaluate, utilize, share, and create content using information technologies is called digital literacy. Access to the Internet has increased from time to time. This showed that technology has infiltrated into our daily lives and encouraged more processes to become data-driven and virtual.

This study used descriptive statistical methods to determine the digital literacy level among Foundation Studies in Management students. This study also identified reasons why students engage in digital technologies. The findings showed that female students tend to spend more hours on their cell phones and computers. Most of the student in Foundation Studies in Management responded with moderate-high agreement on their level of digital literacy, which means that most of them understand and can apply simple and fundamental computer knowledge for personal purposes and academic matters

PERSPEKTIF JURNAL SAINS SOSIAL DAN KEMANUSIAAN

PERCEPTION OF UNDERGRADUATE STUDENTS TOWARD MODE OF LEARNING IN HIGHER EDUCATION INSTITUTION: THE IMPACT OF COVID-19

ZAHAYU BINTI MD YUSOF, MASNITA BINTI MISIRAN @ BAKUN

Hybrid mode of learning is an education method that combines online learning and traditional learning (face to face). In semester A212, Universiti Utara Malaysia (UUM) was conducted hybrid mode of learning in delivering classes. This selection of method has raised different opinions from the students. Therefore, this study examines the UUM undergraduate student's perception towards mode of learning in the university. Convenience sampling method was used to collect the data. While frequency analysis and simple logistic regression analysis were adopted as statistical methods in analysing the data. Whereas R programming, Statistical Package for Social Science (SPSS) and Excel software was used as data analysis tools. Two hundred sixty-eight (268) UUM undergraduate students were chosen as respondents in this study. They were given a set of question regarding the mode of learning. Student's academics in the form of Cumulative Grade Point Average (CGPA), their major reasons to support and against hybrid mode of learning, student's preference of study environment, and their total daily hours spending on their study during hybrid mode of learning are investigated to determine the relationship between the mode of learning and respondents CGPA.

The result indicates that the major reason that students supported hybrid mode learning is because this mode of learning helps in a way of reducing the internet connection problem. This is because the university took seriously in making sure that the internet facilities is at the best condition. Overall, students have a preference for hybrid mode learning and there is no relationship between total daily hours that they spent on study during hybrid mode learning towards their CGPA.

ASIAN JOURNAL OF ASSESSMENT IN TEACHING AND LEARNING

FORECASTING MALAYSIAN NATURAL RUBBER PRICES: AN ANALYSIS OF TRENDS AND FACTORS INFLUENCING PRICE FLUCTUATIONS

ZAHAYU BINTI MD YUSOF, ROSSHAIRY BINTI ABDUL RAHMAN, ZAKIAH BINTI HASHIM, NOR FARAH HANIM MOHAMAD NORIZAN, SITI NOOR ASYIKIN BINTI MOHD RAZALI,

Recently, the natural rubber industry has grown to be one of Malaysia's most significant economic sectors. However, Standard Malaysia Rubber (SMR20) prices have frequently fluctuated. To predict the price situation in the future, it is crucial to construct a price prediction or forecasting model. As such, a study on forecasting Malaysian natural rubber prices over the next ten years needs to be done. The data gained for this study were from Malaysian Rubber Board covering 1995 to 2022. Univariate forecasting methods such as Holt's Winter, Double Exponential Smoothing, Naive with Trend and Autoregressive Integrated Moving Average (ARIMA) were used.

The best method to forecast natural rubber prices was decided based on the lowest measurement error. From the analysis, ARIMA was chosen because it has the smallest measurement error to predict natural rubber prices over the next decade. As a result, Malaysia's natural rubber prices showed an upward trend.

JOURNAL OF GLOBAL INNOVATIONS IN AGRICULTURAL SCIENCES

IDENTIFICATION OF FACTORS AND RISK ASSESSMENTS ON FINANCIAL LITERACY: A CASE STUDY ON HOME PURCHASES

HASIMAH BINTI SAPIRI, ZAHAYU BINTI MD YUSOF, MASNITA BINTI MISIRAN @ BAKUN, NUR NAJIHAH BINTI ASHAARI

Owning a house is among the significant aspects of a productive lifestyle. However, the persistent rise in house prices has affected homeownership for low-income young adults. Due to the poor financial literacy among employed young adults in Malaysia, it is more difficult for them to own a home due to financial constraints. Therefore, this study intends to investigate the factors contributing to financial literacy and the potential risk associated with its absence among working young adults. The methodologies used in this study were the factor analysis approach and decision tree analysis. Note that this study investigates financial literacy among young adults.

A questionnaire was utilized for gathering the data, and a convenient sampling technique was adopted for data collection. According to the findings, four variables influence financial literacy among working youths: financial knowledge, financial behavior, financial education, and financial attitude. Consequently, the factors listed in exploratory data analysis in these four variables have been summarized to examine the perceived risk of financial literacy among adolescents in terms of purchasing a home. Finally, this study contributes as a guideline for policymakers in offering structured awareness programmes to improve financial literacy as well as homeownership knowledge among working youths for their future financial resilience

JOURNAL OF COMPUTATIONAL INNOVATION AND ANALYTICS

CONSTRUCTING THE WORKING MODEL OF A 2-UP SYSTEM PYRAMID SCHEME

HASIMAH BINTI SAPIRI, ZAHAYU BINTI MD YUSOF, MASNITA BINTI MISIRAN @ BAKUN, NUR NAJIHAH BINTI ASHAARI

A pyramid scheme is a business model that is illegal in many countries. It works by recruiting members via promises of payments or services by enrolling more people in the scheme. In recent years, pyramid schemes have been expanding, and many people have fallen victim when the schemes collapse. In this study, the working model and formulation of the 2-up system pyramid scheme are studied to identify its fundamental elements and working mechanism. A model is constructed mathematically to visualise the system's profitability.

To further prove that a pyramid scheme is unsustainable, the limitations of a 2-up system may lead to the collapse of the pyramid structure, and a simulation study on the probability of an individual losing money in a 2-up system is investigated. The method of investigation involved literature reviews and data visualisation. As no references are available on the 2-up system formula, the reading of research articles and websites became the primary source of study. Data visualisation is carried out to showcase the cash flow of profits in a 2-up system pyramid scheme. The fundamental element of the system is for one member to recruit at least three others to prevent a loss as profits from the first two recruits will be channelled to an upline member. According to the investigation of limitations, approximately 65.78% of the world population would need to join the 2-up system when the level rises to 21, where the pyramid structure is vulnerable to collapse. There is a possibility of pyramid scheme members suffering losses since there is a requirement to make a profit. Pyramid schemes are destined to fail in the long run as the possible returns of an individual is never guaranteed.

JOURNAL OF BUSINESS AND SOCIAL DEVELOPMENT
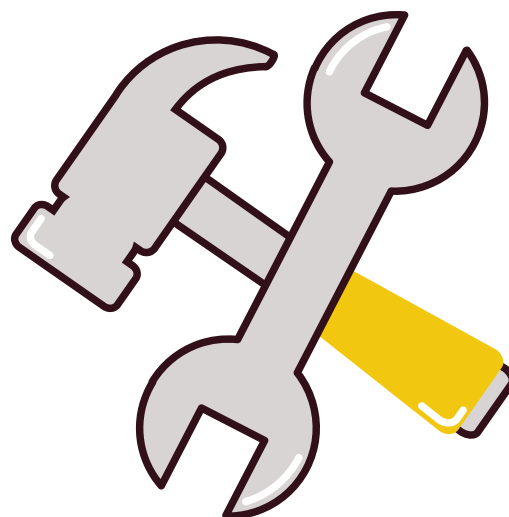
DIGITAL LITERACY AMONG STUDENTS: A CASE STUDY AT CENTRE OF FOUNDATION STUDY IN MANAGEMENT.

ZAHAYU BINTI MD YUSOF

The ability to navigate the digital world using reading, writing, technical skills, and critical thinking together with the ability to discover, evaluate, utilize, share, and create content using information technologies is called digital literacy. Access to the Internet has increased from time to time. This showed that technology has infiltrated into our daily lives and encouraged more processes to become data-driven and virtual.

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VOICE OF ACADEMIA

TREND OF LABOR FORCE PARTICIPATION IN MALAYSIA

ROSNALINI BT. MANSOR, ZAHAYU BINTI MD YUSOF, BAHTIAR JAMILI BIN ZAINI

Malaysia is a progressive country with strong resilience towards external shocks in recent years. Its immediate aim is to achieve the status of a high-income country with inclusion improvement (IMF, 2018). In the current report, IMF highlighted its major upside risk is on the global demand for electronics, its downside risk includes the exposures in the real estate sector, and emphasis should be given to economic growth while maintaining stability, raising productivity and investment, and further encouraging labor market reforms.

Among immediate reforms to undertake include female labor force participation, the improvement in the quality of education and the reduction in skills mismatched. With a steady growth of its real growth domestic product (GDP) of 5.8%(5.3%), the inflation rate of 3.8%(3.2%), and an unemployment rate of 3.4%(3.2%) in 2017 and 2018 (projected) respectively, Malaysia should keep its momentum in the right direction to achieve high-income status.

INTERNATIONAL JOURNAL OF HUMANITIES AND SOCIAL DEVELOPMENT RESEARCH

FORECASTING ON HOUSE PRICE INDEX USING ARTIFICIAL NEURAL NETWORK

GANGAIEISVARI A/P GOBALKRISHNAN , ZAHAYU BINTI MD YUSOF

Forecasting the residential property sector is a crucial component in the decision-making process for investors and government in supporting asset allocation, developing property finance plans and implementing a relevant policy. The purpose of this study is to examine the determinants of Penang house price index and to develop a model to forecast Penang house price index in Malaysia. Estimation is done by using ordinary least square and artificial neural network method. Relevant data sets were obtained from the Monthly Statistical Bulletin, Bank Negara Malaysia and National Property Information Centre. The empirical analysis of this research is based on quarterly time series data which cover the periods from 2005Q1 to 2022Q1.

The main findings reported that base lending rate and unemployment rate are negatively associated with and have significant impacts on Penang house price index. Meanwhile, gross domestic product is positively related to and has a significant impact on Penang house price index. Consumer price index shows a positive sign; however, it recorded an insignificant impact on Penang house price index. Even though there are three independent variables recorded significant impact on Penang house price index, yet gross domestic product is the most vital determinant of Penang house price index in Malaysia. The artificial neural network model was trained and tested using quarterly time series data from 2005Q1 to 2022Q1 and the model was validated using data from 2021Q1 to 2022Q1. Model validation indicates that artificial neural network has a high level of accuracy in its ability to learn, generalize, and converge time series data efficiently as well as able to generate reliable forecasting information.

JOURNAL OF CONTEMPORARY ISSUES AND THOUGHT

INVESTIGATING FACTORS AFFECTING PERSONAL BANKRUPTCY IN MALAYSIA THROUGH REGRESSION ANALYSIS

MASNITA BINTI MISIRAN @ BAKUN, ZAHAYU BINTI MD YUSOF

Investigation on the factors of why people go bankrupt needs to be identified to reduce bankruptcy cases among Malaysians, as the number of bankruptcy cases has significantly increased in Malaysia. This study intended to know the relationship between the unemployment rate, lending rate, non-performing loan, GDP, and household debt toward personal bankruptcy and was investigated using multiple linear regression (MLR) analysis by utilizing the available data from 2005 to 2021 through Malaysia of Department of Insolvency (MDI).

The findings suggest that two variables, i.e., the unemployment rate and lending rate, are statistically significant towards personal bankruptcy in Malaysia.

JOURNAL OF INFORMATION AND KNOWLEDGE MANAGEMENT

APPLICATION OF BURRXII-DAL AND WEIBULL-DAL DISTRIBUTION: A CASE STUDY OF WHEAT YIELD IN MULTAN PAKISTAN

SHAHBAZ NAWAZ , ZAHAYU BINTI MD YUSOF, FRAIDAY OKWONU ZINZENDOFF

Statistical analysis is highly dependent on the Probability distribution of the data and new models are most important part for the expansion of this field. Burr-XII DAL (BDAL) and Weibull-DAL (WDAL) distribution with five parameters are used to analysis the distribution and to predict the yield and growth rate of different products.

Objective
The purpose of the study is to determine the effectiveness of the application of modified BURRXII-DAL and WEIBULL-DAL distribution for the analysis of the wheat yield in Multan, Pakistan by estimating their maximum likelihood.

RES MILITARIS

CONFIDENCE INTERVALS BY BOOTSTRAPPING APPROACH: A SIGNIFICANCE REVIEW

SITI FAIRUS BINTI MOKHTAR , ZAHAYU BINTI MD YUSOF, HASIMAH BINTI SAPIRI

A confidence interval is an interval estimate of a parameter of a population calculated from a sample drawn from the population. Bootstrapping method, which involves producing several new data sets that are resampled from the original data in order to estimate parameter for each newly created data set, allowing an empirical distribution for the parameter to be estimated. Since certain statistics are harder to estimate, confidence intervals are rarely employed. Several statistics might necessitate multi-step formulas assuming that are impractical for calculating confidence intervals. This paper reviews research on the concept of bootstrapping and bootstrap confidence interval. The current narrative analysis was developed to answer the main research question:(1) What is the concept of the bootstrap method and bootstrap confidence interval?(2) What are the methods of bootstrapping to obtain confidence interval?

This study has found general bootstrap method idea, various techniques of bootstrap methods, its advantages and disadvantages, and its limitations. There are normal interval method, percentile bootstrap method, basic method, first-order normal approximation method, bias-corrected bootstrap, accelerated bias-corrected bootstrap and bootstrap-t method. This study concludes that the advantages of using bootstrap CI is that it does not require any assumptions about the shape of distribution and universality of the approach. Bootstrapping is a computer-intensive statistical technique that relies significantly on modern high-speed digital computers to do massive computations.

MALAYSIAN JOURNAL OF FUNDAMENTAL AND APPLIED SCIENCES
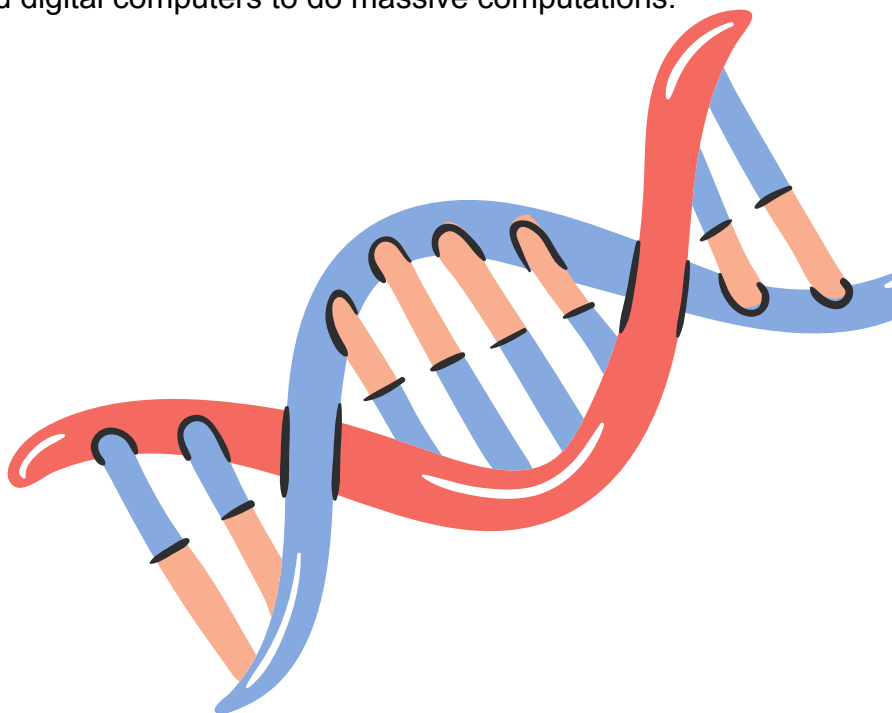
THE DIGITAL DEFENCE AGAINST CYBERBULLYING: A SYSTEMATIC REVIEW OF TECH-BASED APPROACHES

CHAN NEE NEE, NADIA SAMSUDIN, HO MENG CHUAN, MOHD IKHRAM BIN MOHD RIDZUAN, OOI PEI BOON, ANI MUNIRAH BINTI MOHAMAD, HERBERT SCHEITHAUER

Cyberbullying, which has been exacerbated by the widespread use of smartphones and the increasing stress associated with the pandemic, needs the promotion of positive online behaviour, cyberbullying awareness, and victim support. The PRISMA technique is used in this review to identify effective preventative tools and intervention options. Eleven studies met our inclusion criteria and were selected for review.

A quality assessment was conducted. Upon thorough evaluation of the included studies, the intervention data was compiled in a narrative format. Using thematic analysis, we explored the effectiveness of technological interventions for preventing cyberbullying comprehensively. Technology-driven strategies for identifying and combating cyberbullying in educational settings, such as language-specific cyberbullying detection tools, IRCB programmes for empowering teenagers, and technologies such as CREEP Semantic Technology and CREEP Virtual Coach, have showed potential. TIPIP and the #WIIWY movement have also assisted to raise awareness and educate people about cyberbullying. However, more research is required to design targeted interventions that address varied demographics and circumstances, while including parents and taking the target audience's age into account remains critical for effective technology-driven educational interventions and digital advocacy.

COGENT EDUCATION

EDUCATION ON THE CLOUD: GOVERNING PLAGIARISM IN HIGHER EDUCATION INSTITUTIONS OF MALAYSIA

NOR AKALIAH BINTI SHAHARUDIN , SYARIZA BINTI ABDUL RAHMAN, AIDA MAUZIAH BINTI BENJAMIN, MOHD FAIZAL BIN OMAR, MUSTAFA MAN

In recent years, education has taken a shift from traditional classroom settings to online and remote classes. Teaching and learning have had a robust makeover, particularly given the COVID-19 breakout since end of 2019 and early 2020, in which higher education institutions all moved to online and remote learning. However, being a doubled-edged sword, technology works both ways. While one potential advantage of online learning is online search and research opportunities through online medium, where information is at the fingertips, there is also risk involved, particularly potential plagiarism among students of higher education institutions. Plagiarism is form of cheating and is a serious academic offence.

In Malaysia, plagiarism, is a growing concern. It's violation of law and it deals with ethical and integrity issues. This article discusses the law that govern the issue of plagiarism and the defences to plagiarism in Malaysian higher education institution. Various laws and policies are outlined, to demonstrate the governance of plagiarism as well as its defences. The paper concludes by highlighting that plagiarism shouldn't be a norm for the students in Malaysia. There can be many rules and regulations against plagiarism, but the utmost important thing is to raise awareness among the students on the dangers and liabilities forthcoming the commission of plagiarism.

INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN PROGRESSIVE EDUCATION AND DEVELOPMENT

AN ANALYSIS OF THE KEY CHANGES WITH REFERENCE TO INTERNATIONAL LABOUR STANDARDS – A POSITIVE IMPROVEMENT FOR MALAYSIA'S EMPLOYMENT REGIME

RAFIZAH ABU HASSAN, HARTINI SARIPAN, NURUS SAKINATUL FIKRIAH MOHD SHITH PUTERA, SARAH MUNIRAH ABDULLAH, ANI MUNIRAH BINTI MOHAMAD

In Malaysia, employment issues are primarily governed by the Employment Act 1955 [Act 265] being the key piece of legislation on the matter. Hence, it is imperative to analyze whether the amendments brought by the Employment Amendment Act are positive improvements as compared to the current provisions of the Employment Act as well as adequate according to the international labour standards as stated by the International Labour Organization. In 2022, the Employment (Amendment) Act 2022 as well as the Employment (Amendment of First Schedule) Order 2022 were passed which will bring key changes to the employer-employee relationship in Malaysia. These amendments to the Employment Act 1955 are overdue, given that the last amendments made was more than a decade ago in April 2012.

The research employs a qualitative methodology and incorporates a content analysis approach by examining the relevant legislation, the conventions, recommendations and publications of the International Labour Organization, as well as other publications from researchers. The main finding of the research is that although the amendments brought by the Employment (Amendment) Act 2022 were a positive improvement, there is still much room for improvement for the employment regime, as well as to expand the amendments to the concurrent legislation in Sabah and Sarawak. However, further research should be conducted to study whether the implementation and enforcement of the amendments to the Act is successful in improving the rights of employees in Malaysia and bring positive changes to the employer-employee relationship.

## INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS AND SOCIAL SCIENCES

ENABLING EFFICIENT BUSINESS PROCESS MINING USING FLATTEN SEQUENTIAL STRUCTURE MODEL

ANG JIN SHENG , JASTINI BINTI MOHD JAMIL, IZWAN NIZAL BIN MOHD SHAHARANEE, MOHAMAD FADLI BIN ZOLKIPLI

The volume of extensible markup language (XML) format documents is increasing every day due to the development of internet and the use of XML format in business process log file. Storing business process log data in XML format is preferable due to the ability of extensible and storing data irrespective of how it will be represented. However, mining XML format data poses challenges due to its complex data structure and dimensions.

This paper proposes a method to convert XML format document into a structured format without ignoring the structural information. Converting semi-structured business process log data into structured format will allow more data mining techniques and statistical test be conducted and extract information from the business process log data. The experiment in this study performs t-test on a set of synthetic data and a set of real-world data to prove that information in business process log can be extracted through normal statistical test. Empirical results show that statistical analysis can be conducted on business process log data especially in XML format after flatten sequential structure model (FSSM) is used.

INDONESIAN JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE
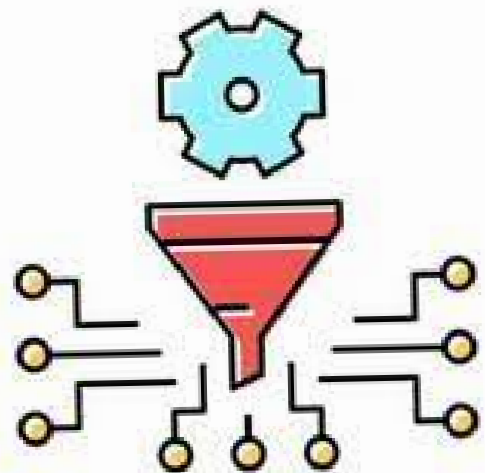
CLUSTERING STUDENT PERFORMANCE DATA USING K-MEANS ALGORITHMS

SULTAN JUMA SULTAN AL, IZWAN NIZAL BIN MOHD SHAHARANEE, JASTINI BINTI MOHD JAMIL

Education institutions store large amounts of data regarding students, such as demographics, academic-related data, and student activities. These data were recorded and stored in many ways, including different filing systems and database formats. By having these data, education institutions have a better way to manage and understand their students. In addition, information related to their students can easily be accessed and extracted. As more data is recorded and stored, this could allow the educational institution to make more informed decisions and give educators good insight into the educational system.

The research approach known as educational data mining (EDM) focuses on using data mining techniques to extract massive data from the educational context and transform it into knowledge that can improve educational systems and decisions. Clustering, an unsupervised learning technique, is one of the most powerful machine- learning tools for discovering patterns and unseen data. This work aims to provide insights into the data obtained from Oman Education Portal (OEP) related to the student's performance by manipulating the k-means algorithm.

INDONESIAN JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

COLLABORATIVE LEARNING IN TERTIARY EDUCATION CLASSROOMS : WHAT DOES IT ENTAIL?

ROSNA BT AWANG HASHIM, NORHAFEZAH BINTI YUSOF, ABDERRAHIM BENLAHCENE, AMRITA KAUR, S. KANAGESWARI A/P SUPPIAH SHANMUGAM

Collaborative learning has been increasingly recognized as an effective approach to promote students' success in higher education. To better understand the factors that contribute to successful collaborative learning,

This study applied the Biggs' presage-processsproduct (3P) general model of learning to investigate the role of teaching quality, student-faculty interaction, and relatedness as presage factors, collaborative learning as process factor, and reflective and integrative learning and higher-order thinking as product factors.

MALAYSIAN JOURNAL OF LEARNING AND INSTRUCTION
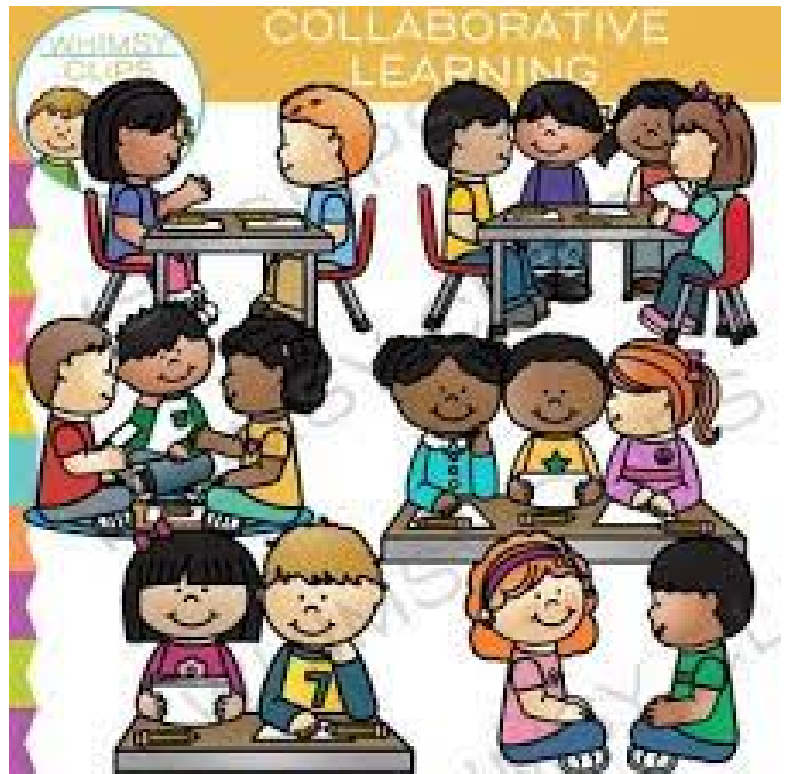
PSYCHOMETRIC PROPERTIES OF THE QUALITY OF UNDERGRADUATE LEARNING EXPERIENCES IN MALAYSIAN UNIVERSITIES

ROSNA BT AWANG HASHIM, NORHAFEZAH BINTI YUSOF, S. KANAGESWARI A/P SUPPIAH SHANMUGAM, AMRITA KAUR, ABDERRAHIM BENLAHCENE

Malaysian higher educational institutions are bracing to compete at the international level with the institutions that produce evidence of quality teaching and learning and positive students' experiences. In this matter, students' engagement in learning activities has been heralded as a quality indicator of the higher educational institutions' performance as well as undergraduate students' learning. However, there is a need to examine the level of undergraduate learning engagement based on the principles of good educational practices and a need to provide empirical evidence of the extent to which higher educational institutions in Malaysia support undergraduates' learning and growth. For this purpose, the current study proposes a framework for quality teaching and learning in Malaysia by developing a measurement instrument to measure the quality of undergraduates' learning experiences (QULEX) in Malaysian higher education.

The current study evaluated the reliability and factor structure of the QULEX using a sample of 1,892 Malaysian undergraduate students. QULEX consists of 12 factors with 47 items to measure the quality of undergraduates' learning experiences. The factor structure of the QULEX was examined by employing exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). The findings showed that items loadings, composite reliability, convergent validity, and discriminant validity of the variables provide robust empirical evidence to support the implementation of QULEX in the Malaysian academic context. The findings from this study will inform policymakers and practitioners upon student feedback concerning the variables that will derive teaching and learning excellence.

ASIA PACIFIC JOURNAL OF EDUCATORS AND EDUCATION

CHALLENGES OF VIRTUAL LEARNING: AN EXPLORATORY STUDY AMONG ORANG ASLI PUPILS FROM THE MATHEMATICS TEACHERS' PERSPECTIVES

S. KANAGESWARI A/P SUPPIAH SHANMUGAM, ARSAYTHAMBY A/L VELOO, YUS'AIMAN BIN JUSOH@YUSOFF

The prolonged COVID-19 pandemic subsequently led to the digitalization of education, whereby globally virtual learning was implemented to sustain learning. This study aims to explore the challenges faced by Orang Asli pupils when carrying out virtual learning from the mathematics teachers' perspectives. By employing exploratory qualitative research design and purposive sampling, five teacher participants from two schools in two states in Malaysia were selected. Data was collected from two online and face-to-face focus group interviews.

Thematic analysis identified four major themes, which are challenges related to language proficiency, logistic, home and classroom. Based on these emergent themes, various stakeholders can focus their efforts to address these challenges to mitigate Orang Asli pupils' potential learning loss in the post-Covid era and thus, ensure they remain abreast to current mathematics learning. Further studies should explore on mobile and modular learning as promising alternatives means of content delivery for their future virtual learning.

DIASPORA, INDIGENOUS, AND MINORITY EDUCATION

PRINSIP 'AMAL SOLEH DALAM ETIKA KERJA ISLAM: SATU ANALISIS KONSEPTUAL

MOHAMAD KHADAFI BIN HJ. ROFIE, NURAKMAL BINTI AHMAD MUSTAFFA, NOR HANANI BINTI ISMAIL, MALINA BINTI ZULKIFLI

This paper has two main purposes. First, to analyze the views of scholars regarding the principles of'amal soleh. Second, to formulate the principles of'amal soleh in Islamic work ethics. Islam is a holistic religion. It covers all aspects of life, including work morals. Although ethics and morals are similar, they are very different in essence. In this paper, the term ethics is used because it is a guiding term in every work organization. The term work ethics is not found in the Qur'an, but'amal soleh is analogous to work ethics. Thus, the principle of'amal soleh can be discussed as a principle of Islamic work ethics.

The question is, how do scholars view the principles of'amal soleh? Next, how can the principles of'amal soleh be discussed in the context of Islamic work ethics? This paper aims to answer both questions through content analysis of some literature. For the first question, this paper found 10 elements related to'amal soleh. For the second question, this paper concluded 10 elements of'amal soleh in the context of Islamic work ethics

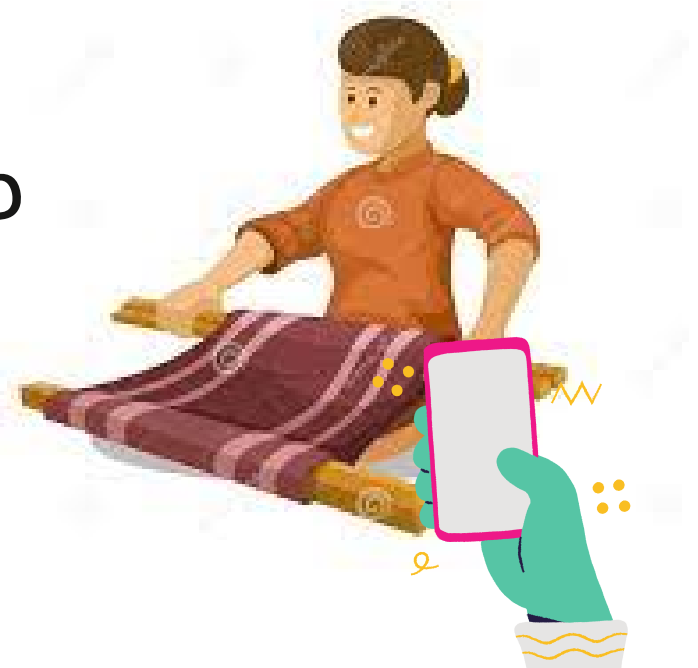INTERNATIONAL JOURNAL OF ENTREPRENEURSHIP AND MANAGEMENT PRACTICES

CUSTOM AND ORDER BATIK APPLICATION SYSTEM (COBS)

IDYAWATI BINTI HUSSEIN @ HUSSEN, MAZIDA BINTI AHMAD

Batik in general is a very delicate thing to make and design. As the design of batik keep on evolving throughout the years the same goes for the buyer where many of them want to create a new and unique batik design for themselves. So, the problem resulting to this project development is that batik buyers are having a hard time in specifying their needs and preferred batik design to the batik seller. This research aims to design and develop a custom and order function within a mobile batik identification application. Thus, the project objective is to provide a more efficient platform for the customer to express their needs regarding their preferred batik design where they can custom the batik design by themselves using the tools provided in the application system. Then, the methodology selected for this project development is Rapid Application Development (RAD) model and it includes 4 phases of management strategy. Through previous research we can see that it is more beneficial for all the business industries to improve their business operation through digital implementation.

Compatible with the previous research, this project findings indicates that though digital implementation which in this case is the COBS do help improve the batik seller business operation mainly through customer satisfaction. In conclusion, COBS help improve the customer buying batik experience. This project help contributes a better alternative through digital implementation for all the clothing business entrepreneurs to further improve their business operation.

MULTIDISCIPLINARY APPLIED RESEARCH AND INNOVATION

AGILE AND UX APPLICATION IN DESIGN AND DEVELOPMENT OF JOB PORTAL WEB APPLICATION

MOHD SAMSU BIN SAJAT, IDYAWATI BINTI HUSSEIN @ HUSSEN

This article describes how User Experience (UX) process is applied in designing and developing a job platform at Universiti Utara Malaysia (UUM). The existing system requires applicants to search through print and visual media for job opportunities. Besides, applicants must apply for the job using forms and other traditional procedures and show for interviews on a specific date and location, which is time-consuming and inconvenient. Employers must post job openings, sort all application information, execute selection procedures, and complete the formalities. This method necessitates a significant amount of time and resources. In this case, recruitment should be timesaving, cost-effective, and, most importantly, identify the best candidate for the job. Job Portal Web Application is a web-based system designed for applicants to find jobs and help the employer find suitable candidates for the job which allows job seekers to identify openings and find qualified candidates for open positions quickly.

This web-based system project is carried out using Agile methodology. JPWEBAPP comprises of six functional requirements which are register/login, add, edit, delete, save and display. It is intended to be used by admin and users. Users can register and login to the system with their username and password. The JPWEBAPP can benefit the users, it will be easier to upload and download the files. The web-based system will provide a simple, user-friendly, and manageable platform. It will be easier to upload and download the resume files.
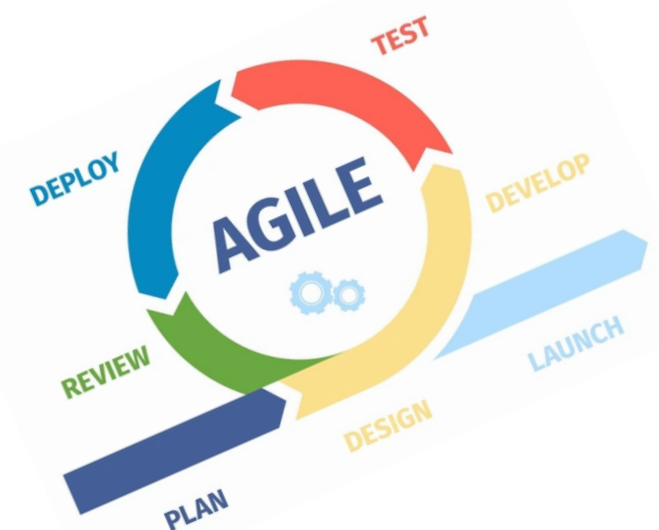
EXTENDED HERMITE-HADAMARD(H-H) AND FEJER'S INEQUALITIES BASED ON GEOMETRICALLY-S-CONVEX FUNCTIONS IN THIRD AND FOURTH SENSE

SABIR YASIN , MASNITA BINTI MISIRAN @ BAKUN, ZURNI B OMAR, RABIA LUQMAN

In this paper, -convex and -convex functions are merged to form -convex function. Inequalities of the Hermite-Hadamard (H-H) and Fejer's types will then be extended by using the -convex function and its derivatives. Some special cases for these extended H-H and Fejer's inequalities are also explored in order to get the previously specified results.

The relationship between newly constructed Hermite-Hadamard and Fejer's types of inequalities with the average (mean) values are also discussed.

HERMITE-HADAMARD INEQUALITY FOR PRODUCT OF (H1, H2, S)-CONVEX AND M-HARMONICALLY CONVEX FUNCTION

SABIR YASIN , MASNITA BINTI MISIRAN @ BAKUN, ZURNI B OMAR

IIn this paper, a new definition of (m, h1, h2, s)-Harmonically convex function is introduced by combining m-convex, (h1, h2)-convex, s-convex, and harmonically convex function. Nowadays the approach of combining different convex functions is being used to extend the mathematical inequalities. In this paper, H-H inequality is considered to extend the fact that the combination of two or more convex functions combines their properties also.

This innovative approach of combining convex functions leads to new applications in a variety of domains, including mathematics as well as other fields. These given inequalities can be considered as refinements and improvements to previously established results.

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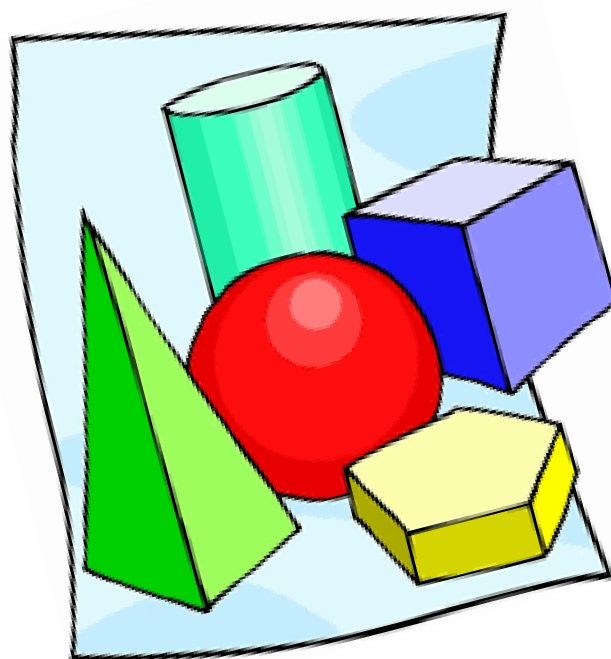
ARTICLE IN PROCEEDING

FACTORS AFFECTING MENTAL HEALTH AMONG WORKERS IN MALAYSIA DURING COVID-19 PANDEMIC

NURUL SYAFIQAH BINTI ISHAK LATFI , HAZIMAH HUSNA BINTI MAHMUD , AMIRUL HAZIQ BIN ABD KADIR , ZAHAYU BINTI MD YUSOF, MASNITA BINTI MISIRAN @ BAKUN

IAn observation on the government helpline from March 25, 2020 to May 20, 2021, showed that about 85.5% of 145,173 calls been made through the helpline were from people with mental illness. Hospitals under the Ministry of Health reported that they have treated 1,080 cases of suicide attempts during that period. The mental case problem is increasing from time to time. Prior to the Covid-19 outbreak, 20 % of the population in this nation had stress symptoms, according to local surveys. However, the percentage has recently increased to 38%. Hence, the objective of this study is to identify factors influencing Malaysian workers mental health and to investigate the relationship between the factors. The data collection period starts from October 3, 2021 and ends on October 24, 2021. Questionnaire survey was created using Google forms.

The survey was transmitted via social media platforms such as WhatsApp and Telegram. 156 respondents were participated in this survey. SPSS was used for data analysis. Factor analysis method was adopted to examine the underlying dimensions while Structural Equation Modelling technique approach was used to investigate the interactions between variables. Among the variables, depression has been identified as a significant variable with positive relation to Malaysian employees mental health. On the other hand, anxiety and stress did not have an effect on the mental health of the employees.

AIP CONFERENCE PROCEEDINGS
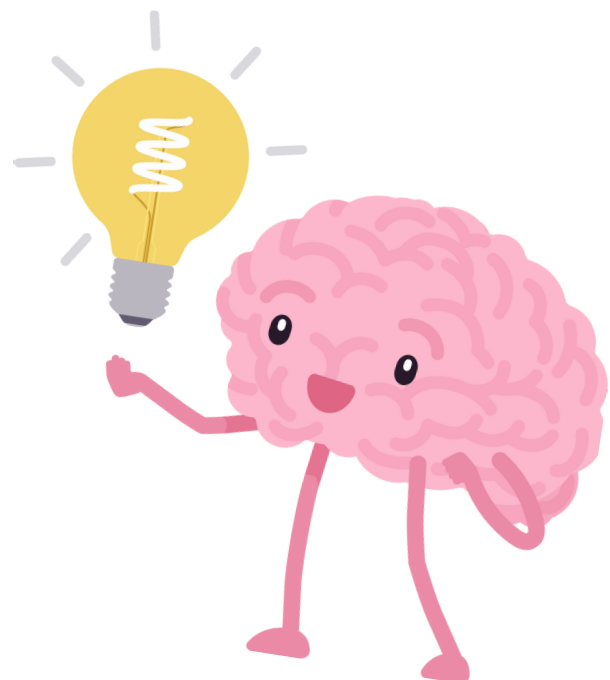
ASSESSING FINANCIAL MANAGEMENT BEHAVIOUR IN YOUNG ADULTS: A FACTOR ANALYSIS APPROACH

HASIMAH BINTI SAPIRI, ZAHAYU BINTI MD YUSOF, MASNITA BINTI MISIRAN @ BAKUN, NOR IDAYU BINTI MAHAT, NUR NAJIHAH BINTI ASHAARI

Managing personal finances is a common struggle for many, young adults included. Malaysia Department of Insolvency reported gradual increment of bankruptcy cases among people in the age group of 25 and below. The alarming statistics requires intervention, thus more indepth study should focus on young adult's financial management behaviour. This age category should be catered since they can make better financial decision in their future. Thus, this study assesses young adult's financial management behaviour by determining factors that influence their financial decisions. A sample of 203 data was gathered by using self-administered questionnaire distributed among young adults and analyzed by using Statistical Package for Social Science (SPSS).

The findings suggest factors that have a significant influence on financial management are financial attitude, financial knowledge, financial education and financial behavior.

AIP CONFERENCE PROCEEDINGS

EVALUATING FACTORS AFFECTING UNIVERSITY STUDENTS' ACADEMIC PERFORMANCE BY USING STRUCTURAL EQUATION MODEL

ZAHAYU BINTI MD YUSOF, MASNITA BINTI MISIRAN @ BAKUN, NUR SYUHAIDA BINTI MOHAMAD RADZI , ASMA NABILAH BINTI SHARIFUDDIN , NOOR HANNAH BINTI SAMSU ANUAR , MUHAMAD FIRDAUS BIN AHMAD , AFNAN AIZZAT BIN ADNAN

Student's academic performance is highly viewed as one of the component to be measured on university students to qualify themselves in the job market. Nevertheless, the students need to cater both academic and non-academic activities to achieve the desired expectation from their future employer. Generally, academic performance is measured in terms of grades; courses and assignments which includes past examinations and programmatic evaluations such as extra-curricular activities. Therefore, the purpose of this study is to examine the factors that

influence university students' academic performance using Structural Equation Modelling approach. After conducting a factor analysis, five factors were identified. The factors are lecturer's assistance and motivation, self-determination, student's habit, universities facilities and services, and parents and friends' support. Finally, structural model was developed and has shown relationships between these five factors.

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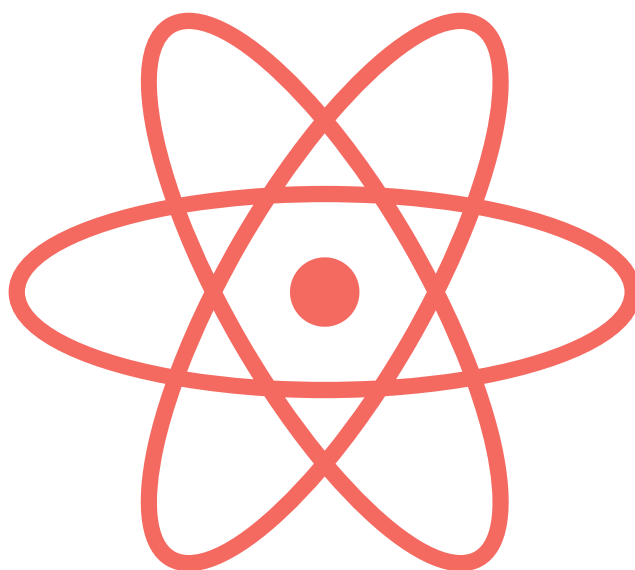
PERTURBATION ANALYSIS AND THE SOLUTION OF LINEAR SYSTEMS

JOSHUA SARDUANA APANAPUDOR, FRIDAY ZINZENDOFF OKWONU, NOR AISHAH BINTI AHAD, NICHOLAS OLUWALE OGINI, ZAHAYU BINTI MD YUSOF

Solutions of linear systems generated by numerical algorithms are occasionally affected by truncation or roundoff errors. Two main sources of errors are input data to the algorithm and the algorithm due to truncation. To estimate these errors, it is necessary to know how the solutions to the problems could change if the input data are slightly perturbed. To achieve this, we compute the condition number g and perform the comparative analysis based on the computed errors which may be larger if the absolute value of $g = (|f'(x)|)$ is large even when the backward error (δx) is small. We also investigated the relative g and backward stability of f(x). For detailed analysis, we considered backward and forward substitutions in matrix factorization while solving the linear system (Ax = b).

We also investigated the perturbation theory for the least-squares problem, the significance of g for the linear system, and the application of the QR decomposition to solve for x in Ax = b. The effects of round-off errors were also investigated based on perturbations at different points in the system. The results are comparably acceptable although we have to tread cautiously in generalizing the outcomes of the investigations.

AIP CONFERENCE PROCEEDINGS

RELATIONSHIP OF POND SIZE ON SURVIVAL RATE OF SHRIMP

ZAHAYU BINTI MD YUSOF, ROSSHAIRY BINTI ABDUL RAHMAN

Shrimp is the most valuable marine trade product in the world today. Shrimp production is an important operation because it creates jobs and contributes to economic development. However, the production of shrimp in a culture system is determined by a variety of factors and the most important factor is the shrimp survival rate. Therefore, this study aims to analyse the shrimp survival rate with other factors including shrimp production and pond size. Specifically, the objectives are (i) to identify the best pond size that has the highest shrimp survival rate, (ii) to identify the correlation between the production and the survival rate, and (iii) to investigate the relationship between the pond size and the survival rate. Boxplot, scatter plot, and Pearson correlation coefficient were carried out to achieve the objectives.

 The results show that, of 35 pond sizes, the best pond size which has the highest shrimp survival rate is at 4578 m2. Also, there is a moderate positive relationship between shrimp survival rate and shrimp production. However, there is no relationship between pond size and shrimp survival rate. Thus, this indicated that the pond size is not a factor that affects the shrimp survival rate. As a conclusion, finding from this study indicate that the shrimp survival rate is affected by shrimp production and pond size is not give a significant factor. The larger the size of the pond does not have much impact on the survival rate of the shrimp.

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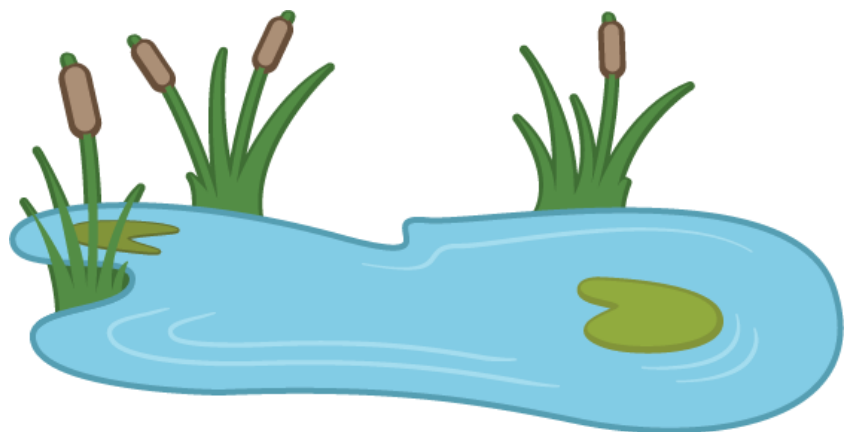
FACTORS THAT AFFECTING NATURAL RUBBER PRICE IN MALAYSIA: A PERSPECTIVE FROM A RUBBER TAPPERS IN PADANG TERAP, KEDAH

ZAKIAH BINTI HASHIM, ZAHAYU BINTI MD YUSOF, ROSSHAIRY BINTI ABDUL RAHMAN, NOR FARAH HANIM MOHAMAD NORIZAN

Rubber industry is one of the backbones and the key player in Malaysia's economy alongside with oil palms, automotive and other industries. In addition, natural rubber has recently become one of Malaysia's most important economic contributors. Natural rubber price fluctuates due to the volatile nature of natural rubber price. Despite this, the price of Standard Malaysia Rubber 20 (SMR20) changes frequently over time. These are some of the reasons why the determination on the factors that influences the price of natural rubber is crucial.

This research aims to identify the factors that affecting the price of natural rubber in Malaysia based on rubber tappers perspective. The data for this research was collected from 200 rubber tappers from Padang Terap area via questionnaire. Convenience and snowball non-probability sampling methods were adopted for data collection. Reliability test and exploratory factor analysis (EFA) was used to measure the items on the questionnaire. There are five factors that have been identified to have influenced on the price of natural rubber. The factors are season, demand and supply, crude oil price, career and productivity.

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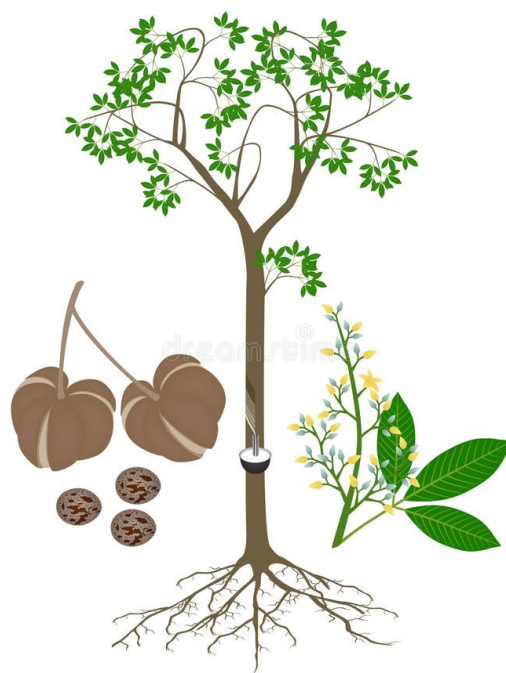
BOOTSTRAPPING METHODS IN COMPUTING CONFIDENCE INTERVAL: REAL DATA APPLICATION

SITI FAIRUS BINTI MOKHTAR , ZAHAYU BINTI MD YUSOF, HASIMAH BINTI SAPIRI

Violation of standard assumptions in traditional method will create problem especially when estimating the confidence intervals. In the realm of applied statistics, bootstrapping methods have achieved widespread recognition and application. Bootstrapping is a useful approach to estimate standard errors and also to obtain confidence intervals for location parameters. Bootstrapping is a computationally costly statistical approach that allows researchers to draw conclusions from the data without the need to fulfil the assumptions.

The purpose of this study is to present the steps involved in calculating the confidence interval using the bootstrapping methods and to discuss on the findings. This paper also compares steps in traditional confidence interval, normal interval, percentile bootstrap and bootstrap-t methods by using real dataset. The result reveals that the normal interval outperformed the other methods as it produced the smallest interval length. Bootstrapping does not need assumptions about the distribution of the data. Bootstrapping is also a useful method because it relaxed from normality, independence, and constants variation assumptions.

AIP CONFERENCE PROCEEDINGS

DETERMINING FACTORS THAT AFFECT HOUSING PRICE IN MALAYSIA VIA FACTOR ANALYSIS

NORANI BINTI AMIT , HASIMAH BINTI SAPIRI, ZAHAYU BINTI MD YUSOF

House is known as the most basic human requirements. As per Maslow's Hierarchy of Needs, a house is one of the physiological and fundamental needs for human survival. In Malaysia, the problem regarding housing issue is frequently spoken regardless on housing prices fluctuations. It happens due to the lack of affordable housing and most of the house are no longer affordable at all. Thus, this study was conducted to determine the factors that affecting the housing price in Malaysia. 245 respondents consisting of homebuyers participated in this survey was selected using convenience sampling technique.

The reliability test was performed to evaluate questionnaire items. The findings of this research indicated that the instrument's reliability and validity were good. Exploratory Factor Analysis identified four factors to have effect on the housing price in Malaysia namely Housing Satisfaction, Housing Policy, Housing Financial and Household Income. This finding hopefully will provide information to the relevance parties while making decision regarding housing in Malaysia.
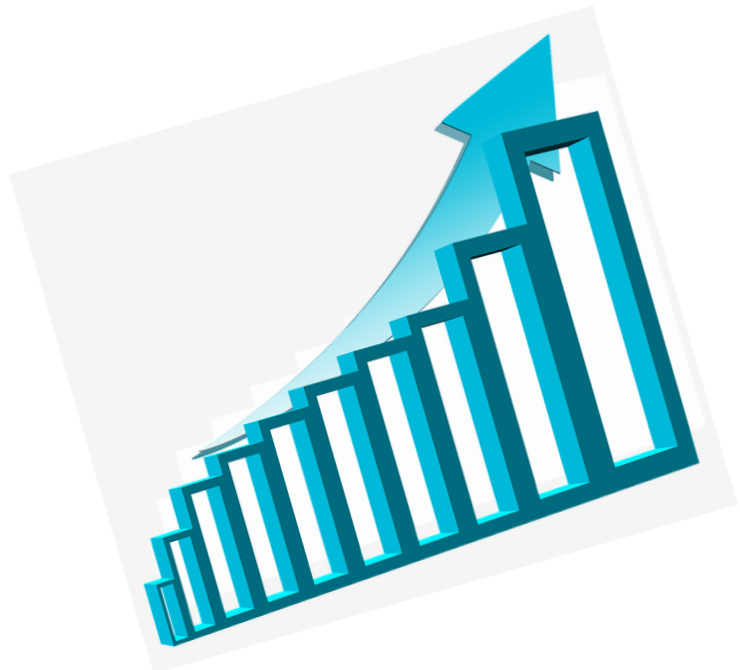
AIP CONFERENCE PROCEEDINGS

MODIFIED CHI-SQUARE TEST OF GOODNESS OF FIT (MCSTGF) BASED ON LEAST SQUARE METHOD: AN APPLICATION TO WATER TRANSPORTATION.

FRIDAY ZINZENDOFF OKWONU, NOR AISHAH BINTI AHAD, FESTUS IRIMISOSE ARUNAYE, MALINA BINTI ZULKIFLI, ZAHAYU BINTI MD YUSOF

This paper is designed to investigate the expected drive time from source (Dolphin and Ugbuwangwejetty) to destination (Kurutie jetty) in Gbaramatu kingdom. The chi square goodness of fit test and the proposed modified chi square test goodness of fit (MCSTGF) are applied to determine the expected drive time from source to destination. The Pearson correlation technique was used to investigate the strength of association between the computed expected drive time and the observed drive time. The results based on the hypothesis revealed that the expected drive time from source to destination with Yamaha 115hp is less than one hour (49 minutes) and more than one hour (95.1 minutes) with Yamaha 90hp.

The finding demonstrated that the expected drive time between 49 minutes and 95.1 minutes depends on the capacity of the speed boat engine. The results showed that the computed expected drive time of the MCSTGF methodand the observed drive time could be used effectively to determine the strength of association. The study inferred that there is a very weak positive association (r=0.021) and (r=0.021) for study condition one and two based on the MCSTGF method whereas thecomputed expected drive time from the conventional chi-square method and the observed drive time indicates that there is no correlation.

AIP CONFERENCE PROCEEDINGS

CLOUD-BASED AUGMENTED REALITY AS A DISRUPTIVE TECHNOLOGY FOR HIGHER EDUCATION

ANI MUNIRAH BINTI MOHAMAD, SASLINA KAMARUDDIN, ZAITON HAMIN, WAN ROSALILI WAN ROSLI, MOHD FAIZAL BIN OMAR, NADIA NABILA MOHD SAUFI

Augmented reality (AR) within the context of higher education is an approach to engage students with experiential learning by utilising AR technology. This paper discusses the process undertaken by a teacher in higher education in designing and implementing cloud-based AR lesson for the students. The methodology engaged was case study at one institution of higher learning in Malaysia. The AR teaching process involves six stages, beginning with the selection of the course, followed by selection of the topic, designing of the AR teaching plan and the implementation of the AR lesson. Upon completion of the implementation of the AR lesson, the teacher and students would provide reflection of their experiences.

The process concludes by the improvement of the AR teaching plan by the teacher. The study found that cloud based has indeed disrupted higher education in terms of providing richer learning experiences to the students, as well as enhanced teaching practices for the teachers. Hopefully, this paper would provide insights into the practices of AR teaching and learning approach for teachers in general, and within the context of higher education in particular. It is also intended that the six-steps process outlined in this paper becomes a reference and be duplicated by teachers at large who might be interested to design and implement AR lessons for their own courses.

PROCEEDINGS: 2023 INTERNATIONAL CONFERENCE ON DISRUPTIVE TECHNOLOGIES

LINKING PROJECT MANAGEMENT AND DATA ANALYTICS FOR ACHIEVING THE SUCCESS OF CAMPUS SUSTAINABILITY

NOR IDAYU BINTI MAHAT

Campus sustainability agenda has now become one of the important agendas in ensuring that higher education institutions will continue to be sustained in their core business. However, the implementation of programs that contribute to the sustainability of a campus demands assurance from all departments and units in an institution, financial support, time and consistent experts' commitment in realizing the determined projects.

The challenge in realizing the sustainability agenda is to obtain a careful design plan to ensure that each project that has been set is deployed as good as possible. This study aims to share the framework that links project management procedures and data analytics in launching the planning, implementation, monitoring and reporting of projects under the campus sustainability agenda. Within this framework, the modified Honshi Kanri X-matrix has been adjusted to enable data from each process within a project to be collected and subsequently analysed using appropriate statistical tools. Next, the communication of findings is presented in a greener platform in order to save some management costs but important information related to campus sustainability efforts can still be conveyed to the target groups. The results obtained show that linking project management and data analytics helps to smooth the implementation and monitoring of the projects at a reasonable cost.

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AIP CONFERENCE
PROCEEDINGS

IDENTIFICATION OF RESEARCH THEMES IN RESEARCH PUBLICATIONS AMONG UUM LECTURERS USING TEXT ANALYTICS

NOR IDAYU BINTI MAHAT

This paper shares the idea of performing text analytics on UUM publication documents to portray some empirical findings of the research themes among researchers in the institution. A sample of journal articles from University Publication System (UPS) based on a chosen academic school was extracted. Next, an algorithm to making sense of the extracted texts using word counting and network among the counted words were executed.

The results of the text analysis include the statistics on the text documents, the themes of words classification and their frequency, the network of themes and the text visualization. The empirical findings indicate clearly the research focus in the selected school, mostly related to statistical quality control. In much details, the research is related to robust modelling of which mostly implemented in fast food industry and hospital. In conclusion, the design framework text analytics is able to identify the pattern of publication in an institution.

E-PROCEEDINGS OF THE
4TH YOUNG RESEARCHERS
QUANTITATIVE SYMPOSIUM

POSTGRADUATE STUDENTS' PRACTICE ON USAGE OF COPYRIGHTED IMAGES FOR EDUCATIONAL WORKS

ANI MUNIRAH BINTI MOHAMAD, FELICIA YONG YAN YAN, NOR ZUHAIDAH MOHAMED ZAIN, NORASIKIN FABIL, NOR EZDIANIE OMAR, NURHAZMAN ABDUL AZIZ

The advent of information and communication technologies (ICTs) in various disciplines brings potential benefits to the users. In the context of education, postgraduate students can get hold of a wide variety of resources for their educational purposes, including images. Nevertheless, one major drawback to this opportunity is the potential for encroachment into the intellectual property rights of the legal owner of the images, primarily copyrighted images. Accordingly, this study embarked to explore the practice of postgraduate students in choosing online images for their educational works, as well as to examine the behavior of postgraduate students when confronted with copyrighted images for their educational works.

Engaging upon purely qualitative methodology, a total of 40 students of higher learning institutions in Malaysia participated in an online survey containing open-ended questions. The data was analysed using computer-aided qualitative data analysis software ATLAS. ti version 22. The study found various resources used by the students to get image sources for their educational works, such as search engines, royalty-free images website and image editing websites. The study further found different attitudes by the students when confronted with copyrighted images, some would avoid using the images, while some others would still use the images in their educational works, with or without acknowledging the creators of the images.

The implication of the study is better understanding of the postgraduate students' practice on usage of copyrighted images for educational works. Hopefully the findings would contribute to the literature on students' behaviour and intellectual property rights in the academic setting.

PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON COMMUNICATION AND MEDIA

COMPLIANCE TO GDPR DATA PROTECTION AND PRIVACY IN ARTIFICIAL INTELLIGENCE TECHNOLOGY: LEGAL AND ETHICAL RAMIFICATIONS IN MALAYSIA

SASLINA KAMARUDDIN, ANI MUNIRAH BINTI MOHAMAD, NADIA NABILA MOHD SAUFI, WAN ROSALILI WAN ROSLI, MOHD BAHRIN OTHMAN, ZAITON HAMIN

AI is becoming increasingly important in cybersecurity. AI-based products detect risks and secure systems and data. Cybercriminals can use technology to launch more sophisticated attacks. AI-based security is in demand due to cyberattacks. With the adoption of AI technology, GDPR requires most countries to have legal measures to protect their citizens' data and privacy. Data protection and privacy issues arise when using AI technology.

AI use must comply with GDPR, including obtaining consent for data processing, ensuring data accuracy, and giving individuals the right to access, correct, or delete their data. Organisations must also be transparent about how their AI makes decisions and not discriminate against individuals or groups. This study examines Malaysia's GDPR compliance on AI usage, data protection, and privacy in light of current concerns.

This study analyses primary and secondary sources using doctrinal research. In 2022, Malaysia's banking, healthcare, and telecommunications sectors were hit by data breaches, indicating that AI is increasing data breaches. Thus, the government must examine citizen data protection and privacy concerns and re-examine its governance, including legal and regulatory mechanisms, to see if it conforms to international norms and consider reforms

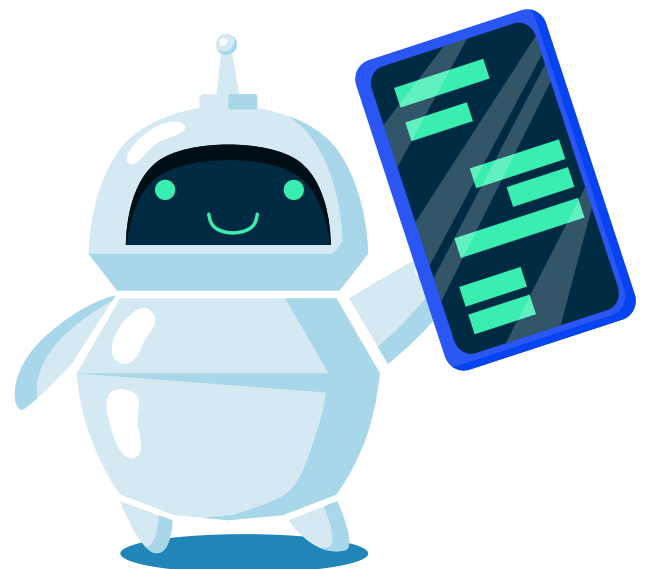PROCEEDINGS: 2023 INTERNATIONAL CONFERENCE ON DISRUPTIVE TECHNOLOGIES

DISRUPTIVE AI TECHNOLOGY AND HATE SPEECH: A LEGAL REDRESS IN MALAYSIA

NADIA NABILA MOHD SAUFI, SASLINA KAMARUDDIN, ANI MUNIRAH BINTI MOHAMAD, NURUL ASYIKEEN ABD JABAR, WAN ROSALILI WAN ROSLI, ZUNIRAH MOHD TALIB

Artificial intelligence (AI) technology is becoming increasingly prevalent in society, offering a range of benefits and opportunities. However, with the rise of AI comes new challenges, particularly in hate speech. Hate speech, a type of expression that incites hatred or violence against individuals or groups based on ethnicity, religion, or other characteristics, has become a growing concern in Malaysia, with social media and online platforms becoming a breeding ground for such speech. In this context, AI technology has emerged as a potential solution for monitoring and regulating hate speech, but it also presents legal and ethical challenges that must be addressed. In view of double edge sword roles played by the development of AI, this article analyses the legal recourse available in Malaysia for disruptive AI technology and hate speech.

The authors claim that AI systems are prone to errors and biases and that there is a risk of relying too much on such plans at the expense of human judgement. There are also concerns regarding the impact of AI on free expression and privacy rights. In addition, the author suggests that artificial intelligence be appropriately regulated to ensure that it is consistent with international human rights standards and national laws.

PROCEEDINGS: 2023 INTERNATIONAL CONFERENCE ON DISRUPTIVE TECHNOLOGIES

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PROCEEDINGS: 2023 INTERNATIONAL CONFERENCE ON DISRUPTIVE TECHNOLOGIES

APPLICATION OF FUZZY DELPHI METHOD IN PRIORITISING THE CRITERIA FOR PHARMACEUTICAL WASTE DISPOSAL IN THE CONTEXT OF GREEN PRACTICE

NURAKMAL BINTI AHMAD MUSTAFFA, NERDA ZURA BINTI ZAIBIDI, NAZIHAH BINTI AHMAD, ANG WEI CHERN

In the case of actual practice, decision problems solved with a group of experts require a mechanism capable of capturing the uncertainty and differences when the experts express their opinions and preferences. The fact is that expert judgment is subjective, and it has generated heated debate among the quantitative-based research community. One of the popular techniques capable of dealing with expert judgment data is the fuzzy Delphi method (FDM).

This study aims to demonstrate the FDM application prioritising the criteria and sub-criteria for pharmaceutical waste disposal in a green context. The results indicate that environment is the most critical criterion in selecting the treatments in green practice, followed by technical and economical as the second and third importance criteria and social as the minor importance criterion. The results from this paper may help the stakeholders and policymakers related to pharmaceutical waste management strategically plan for waste treatment that is more environmentally friendly, safe and secure.

AIP CONFERENCE PROCEEDINGS

CUSTOM AND ORDER BATIK APPLICATION SYSTEM (COBS)

NUR SYUHADA BINTI HALID, MAZIDA BINTI AHMAD, IDYAWATI BINTI HUSSEIN @ HUSSEN

Batik in general is a very delicate thing to make and design. As the design of batik keep on evolving throughout the years the same goes for the buyer where many of them want to create a new and unique batik design for themselves. So, the problem resulting to this project development is that batik buyers are having a hard time in specifying their needs and preferred batik design to the batik seller. This research aims to design and develop a custom and order function within a mobile batik identification application. Thus, the project objective is to provide a more efficient platform for the customer to express their needs regarding their preferred batik design where they can custom the batik design by themselves using the tools provided in the application system. Then, the methodology selected for this project development is Rapid Application Development (RAD) model and it includes 4 phases of management strategy.

Through previous research we can see that it is more beneficial for all the business industries to improve their business operation through digital implementation. Compatible with the previous research, this project findings indicates that though digital implementation which in this case is the COBS do help improve the batik seller business operation mainly through customer satisfaction. In conclusion, COBS help improve the customer buying batik experience. This project help contributes a better alternative through digital implementation for all the clothing business entrepreneurs to further improve their business operation.

MULTIDISCIPLINARY APPLIED RESEARCH AND INNOVATION (MARI): PROCEEDING OF INNOVATIVE RESEARCH, INVENTION AND APPLICATION EXHIBITION

ARTIFICIAL NEURAL NETWORK MODELS FOR WASTEWATER TREATMENT PLANT

SAADI BIN AHMAD KAMARUDDIN, CHOONG-YEUN LIONG, AYU BINTI ABDUL RAHMAN, NOR ANIS NADHIRAH MD NASIR, IRNIS AZURA ZAKARYA

In water treatment plant decision support systems, the study of the treatment problem(s), information acquisition and representation, and the assessment and evaluation of parameters guiding the selection of optimal treatment systems are all critical. Water treatment plants have been an essential feature of the National Integrated Water Resources Management Strategy (NIWRMP), which is consistent with the 10th Malaysia Plan's National Transformation Programme (NTP). Thus, it is appropriate to focus on the water treatment management. This research aims to develop models for Wastewater Treatment Plant (WWTP) via artificial neural network (ANN).

The dataset is secondary data obtained from UCI Machine Learning repository system, which originally aims to characterize the plant's operating condition to forecast faults using the plant's statevariables at each point of the treatment phase. The data were derived from regular sensor readings at a city wastewater treatment facility. Four models were eventually developed using multilayer perceptron (MLP) neural network. The models are: (i) globalperformance input biological demand of oxygen, (ii) global performance input chemical demand of oxygen, (iii) global performance input suspended solids, and (iv) global performance input sediments.

The models' performances were evaluatedusing Sum of Square Error (SSE). Policymakers may then use the suggested awareness model to enhance water quality evaluation control. It provides insight into the public's understanding of treated water quality care in their neighbourhood and thus, helping decision-makers to appreciate better whether people may or may not be aware of the importance of conducting water quality treatment. This research is in accordance with SDG 6 – Clean Water and Sanitation – of global Sustainable Development Goals (SDGs).
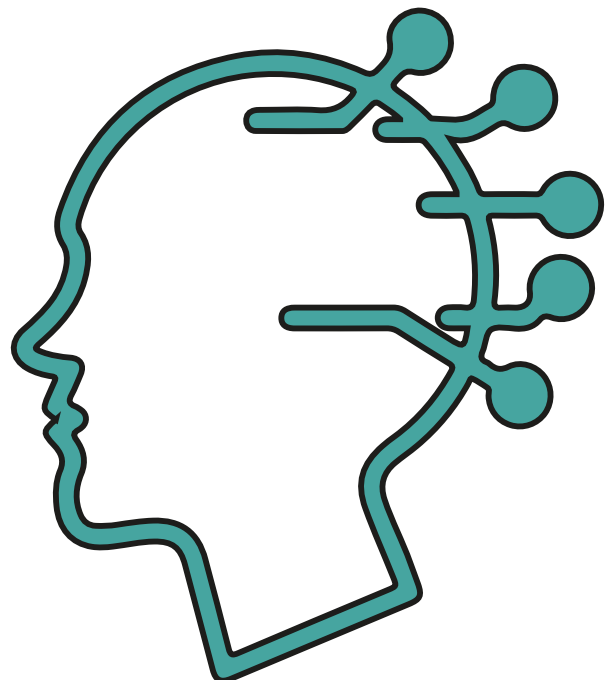

AIP CONFERENCE PROCEEDINGS

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