GCoDTIS 2021

GLOBAL CONFERENCE DIGITAL TECHNOLOGY AND INFOMATION SYSTEMS

Hosted by:

Supported by:

Co Host:

August 5th, 2021

PROGRAM BOOK

“INTO THE DIGITAL WORD”

Sub Theme:

Computer System & Networks

Information Management & Governance

Artificial Intelligence & Data Science

Software Engineering

Information Technology Evaluation

Human-Computer Interaction

Hosted by:

Informatika dan Bisnis (IIB) Darmajaya

Supported by:

LLDIKTI WILAYAH II

Table of content

INTRODUCTION

Speaker Profile

Co Host Profile

ABSTRACT

Rector of Institute of Informatics and Business Darmajaya

Ir. Firmansyah Yunialfi Alfian, MBA., M.Sc.

Bismillahirohmanirrahim

Assalamu'alaikum warrohmatullahi wabbarakatuh.

Our praise is always addressed to the All-Mighty Allah for the mercy and guidance to all of us so that we can carry out The 1ST Global Conference on Digital Technology and Information System (GCoDTIS) 2021 "Into the Digital World" on August 5th, 2021. Shalawat and greetings are praised to our Great Prophet Muhammad who has led all of us into the right path, especially into good norms and behavior.

Digital and Information Technology has very important for human life currently. In the past, humans got information by going to the library, reading a book, reading a newspaper, or witnessing an event firsthand. In this modern era, humans are able to acquire information easily through digital information technology. The digital and information technology is also used to produce, store, process, and disseminate the information. Thus, digital information technology is information management technology in digital form through the digitization process.

Institute of Informatics and Business (IIB) Darmajaya is one of the universities in Indonesia that enhance the intellectual academic activity in the field of technology and business. Furthermore, IIB Darmajaya always concern with the development of all sectors In this recent industrial revolution 4.0 so that the novel researches that are relevant with the industrial revolution 4.0 are necessary for the sustainability of human life so that humankind are ready to face the development of this recent era.

The 1ST Global Conference on Digital Technology and Information System (GCoDTIS) with the topic "Into The Digital World" can be a conference among academicians, scholars, and researchers to discuss about up-to-date issues related to the development of technology with the innovations and strategies in this industrial revolution 4.0. Furthermore, this conference can also be a media to introduce the novel researches that can be innovation-based competitive resources to the recent digital and information development. By collaborating with LLDIKTI Region 2 Southern Sumatra and supported by STMIK Pringsewu as the co-host of this conference, it is expected that this conference will bring and provide an understanding of digital and information technology and its impact on people in Indonesia.

Last but not the least, we do hope that the results of this international conference can be useful for everyone so that they can understand innovation from the digital and information

technology disruption era and the opportunities that can be developed. Hopefully, this international conference can give positive impacts for the welfare of the community.

Wassalamu'alaikum warrohmatullahi wabbaraktuh.

Bandar Lampung, August 5th, 2021
Rector of Institute of Informatics and Business Darmajaya

Ir. Hi. Firmansyah Yunialfi Alfian, MBA. MSc.

Head of Research and Community Service Institution

Dr. Sri Lestari

Bismillahirramanirrahim

Assalamu'alaikum warahmatullahi wabarakatuh,

As we give our praise to Allah, let us remember good health and energy given to all of us in carrying out the International Conference activities in collaboration with LLDIKTI and the Institute of Informatics and Business (IIB) Darmajaya. The sholawat and greetings of all of us are lavished to the Great Prophet, Muhammad, hopefully someday; we will receive the blessing from him.

The Global Conference on Digital Technology and Information System (GCoDTIS) is the conference organized by LLDIKTI and IIB Darmajaya. This conference is implemented to share the research findings from the academicians in the field of Information Technology with the theme "Into the Digital World". The issues, obstacles, and solutions of the ongoing the digital world nowadays will be discussed by the keynote speakers as well as all of the conference speakers.

We really support this conference because it is one of the pillars of the education (Tridharma) – the research that becomes an interesting discussion forum that will be beneficial for the nation and the country. This conference hopefully can be continuously carried out because it is regarded as the place where the high-quality papers are becoming state of the art of the technological developments in Indonesia. We also thank LLDIKTI for trusting us as partners to carry out this conference. We also thank the co-hosts and presenters and participants who attended this GCoDTIS conference.

Furthermore, we apologize if there are shortcomings in serving and providing the best service in this conference. We hope that the conference speakers who have submitted their papers will be able to continue and publish their researches in reputable journals.

Wassalammu'alaikum warahmatullahi wabarakatuh.

Head of Research and Community Service Institution

Institute of Informatics and Business Darmajaya

Dr. Sri Lestari

SPEAKER PROFILE

Dr. Rahayu Ahmad

Senior Lecturer and Researcher, School of Computing, College of Arts and Sciences, Universiti Utara Malaysia, Malaysia

Rahayu Ahmad is currently working in School of Computing, Universiti Utara Malaysia. She was previously appointed as the International Relations Manager in Centre of International Affairs and Cooperation (CIAC), UUM. She holds a PhD in Information Systems from University of Maryland Baltimore County (USA). Her research interest lies in the area of social computing specifically online communities, social media, crowdsourcing and cybercrimes. Her bulk of work is also related to ICT for Development specifically examining ways technologies can help to enhance the quality of life especially among lower income groups or the SME's. She has secured and participated in several international research grants amounting to more than RM 250,000. She also led and participated in several national agencies' grants awarded by the Ministry of Higher Education Malaysia. Due to her active research contributions, she has been awarded the Young Researcher Award by School of Computing, Universiti Utara Malaysia in 2016. In terms of her scholarly contributions, she has published more than 20 SCOPUS indexed journals and numerous articles in proceedings. She also served as technical committee member for various conferences and reviewers for reputable journals. She was previously appointed as Research Fellow in Institute for Advanced and Digital Opportunities, (IASDO). She has also been invited as speakers for publication workshops and seminars. For community role, she has been elected as the Scholarly Exco for Malaysian Association of Information Systems. She assumes an active role in the association for scholarly development for junior researchers through organizing Doctoral Consortiums and other academic related events.

SPEAKER PROFILE

Assoc. Prof. Dr. Masoud Mohammadian

Senior Lecturer and Researcher, Faculty of Science and Technology, University of Canberra, Australia

Masoud Mohammadian graduated with a PhD degree from the University of Central Queensland and an MSc degree from the University of Central Queensland, Australia and his undergraduate degree at the Flinders University, Australia. He taught various undergraduate and postgraduate courses in the areas of computer science and information systems at Edith Cowan University, Monash University and University of Canberra for almost 5 years before joining the University of Canberra in late 1998. Besides teaching, he has been actively pursuing research related to neural networks, fuzzy logic, evolutionary computing, optimization, data analytics, modelling of complex adaptive systems, decision support systems and data security and privacy and their applications in industrial, financial and business problems which involve real time data processing, planning and decision making. His current research also concentrates on the application of computational intelligence techniques for learning and adaptation of intelligent agents and web-based information filtering and data mining. He completed several consultancies with industry. He was the scientific advisor to SolveIT Pty Ltd as he is the scientific advisor to Complexica Pty Ltd. He was a visiting professor at the Purdue School of Engineering and Technology Indiana University – Purdue University Indianapolis in USA, and at the Faculty of Electrical Engineering and Computer Science at the University of Toronto and at the at the University of York in Canada. To date, he has edited over 25 books and conference proceedings in Computational Intelligence and Intelligent Agents. He was chair and co-chaired of over 19 international conferences in Computational Intelligence, Intelligent Agents and has written more than 175refereed publications in the form of books, book chapters, journal articles and conference papers. He has been a keynote speaker at a large number of international conference in Computational Intelligence, Intelligent Agents, Control, Modelling and optimization. He has chaired fourteen international conferences on computational intelligence, intelligent agents and software engineering. Associate Professor Masoud Mohammadian has twenty-eight years of academic experience and he has served as program committee member and/or co-chair of a large number of national and international conferences. He was the chair of IEEE ACT Section and he was the recipient of awards from IEEE from USA and Ministry of Commerce from Austria and several awards for his academic services in Australia. He has received many national and international awards from Australia, Austria and United Sate of America. He has received an honorary professorship from Amity University in Indian in 2018. He is a member of editorial board and review board of several international journals.

SPEAKER PROFILE

Prof. Dr. Parmanand Astya

Dean, School of Engineering and Technology, Sharda University, India

Parmanand Astya is PhD. in Computer Science & Engineering from IIT Roorkee, M.Tech & B.Tech in Computer Science & Engineering from IIT Delhi. Prof Parma Nand is having more than 27 years of experience both in industry and academia. He had received various awards like best teacher award from Union Minister, best students project guide award from Microsoft in 2015 and best faculty award from cognizant in 2016. He had successfully completed government funded projects and spearheaded last five IEEE International conferences on Computing, Communication & Automation (ICCCA), IEEE students chapters, Technovation Hackathon 2019, Technovation Hackathon 2020, International Conference on Computing, Communication, and Intelligent Systems (ICCCIS-2021). He is member Executive Council of IEEE UP section (R-10), member Executive Committee IEEE Computer and Signal Processing Society, member Exec. India council Computer Society, member Executive Council Computer Society of India, Noida section and has acted as an observer in many IEEE conferences. He is also having active memberships of ACM, IEEE, CSI, ACEEE, ISOC, IAENG, and IASCIT. He is life time member of Soft Computing Research Society (SCRS) and ISTE. He has delivered many invited/key notes talks at International & National Conferences/ Workshops/Seminars in India & abroad. He has published more than 150 papers in peer reviewed international/national journals and conferences. He has also published number of book chapters in reputed publications like Springer Berlin Heidelberg. He has reviewed no. of books for publications like Tata McGraw-Hill, Galgotias Publications etc. and papers in journals of international repute. He is an active member of advisory/technical program committee of reputed International/National conferences & reviewer of number of reputed Journals e.g. Springer, Elsevier Journal Computers & Electrical Engineering. His research interest includes Computer Graphics, Algorithm, Distributed Computing and Wireless and Sensor networking. He has successfully completed number of government funded projects. He has spearheaded Ist IEEE International Conference on Computing, Communication & Automation, May 15-16, 2015 (www.iccca2015.com), 2nd IEEE International Conference on Computing, Communication & Automation, April 29-30, 2016 (www.iccca2016.com), 3rd IEEE International Conference on Computing, Communication & Automation, May 5-6, 2017 (www.iccca.in).

SPEAKER PROFILE

Assoc. Prof. Dr. Serhat Duman

Head of Department of Electrical Engineering, Faculty of Engineering and Natural Sciences, Bandirma University, Turkey

Serhat Duman is currently the Head of Electrical Engineering Department of Faculty of Engineering and Natural Sciences, Bandirma University, Turkey. He also previously served as Assistant Manager of Research and Application Center, Duzce University, Turkey. Furthermore, he is also a senior lecturer of Department of Electrical Engineering under Faculty of Engineering and Natural Sciences, Bandirma University, Turkey. Moreover, he had bachelor degree on Bachelor of Science in the field of Electrical and Electronic Engineering from Duzce University, Turkey in 2008. He continued his study on Master of Science in the field of Electrical Education from Duzce University, Turkey in 2018. In addition, he received Doctoral Degree in the field of Electrical Engineering from Kocaeli University, Turkey in 2015. He works in 10-year academic, professional service and is still active presently. During this time, he has been involved as the Research Assistant of Department of Electrical Education from Duzce University in 2009-2012; the Research Assistant of Department of Electrical and Electronics Engineering from Duzce University in 2012-2016; the Assistant Professor of Electrical and Electronics Engineering from Duzce University in 2016-2019; the Associate Professor of Electrical and Electronics Engineering from Duzce University in 2019-2020; and the Associate Professor of Electrical Engineering in Bandirma University presently. He has published a lot of scientific articles in international-indexed journals. Furthermore, he also became a reviewer to several International conference publications. In addition, he has been performing 7 research during 2011-2018. His citation has been indexed on Web of Science and Goodle Scholar.

SPEAKER PROFILE

Dr. Muhammad Said Hasibuan

Senior Lecturer and Secretary of Research and Community Service Institution of Institute of Informatics and Business Darmajaya, Indonesia

Muhammad Said Hasibuan is the alumnus of Bina Darma University, Indonesia, particularly in bachelor degree of Informatics Engineering Program of Faculty of Computer Science. He also completed his master degree in Computer Science in 2003. After completing his master program, he received his doctoral degree in Faculty of Electrical Engineering and Information Technology of Gadjah Mada University in 2020. He was a chairman of the Computer Higher Education Association Organization (APTIKOM region II) in 2011-2014. Moreover, he also became a chairman of the Information and Communication Technology Volunteer (RTIK) of Lampung Province in 2011-2020. He was also a member of Korean Information Society Agency's Information Access Center in Indonesia. He had also joined the ICT TEAM for the ICT Ranking of cities and districts in Indonesia in 2011-2012. He was also a secretary of the Regional Information Technology Council in 2010. Besides, he is also an expert of Communications and Information Service in Lampung Province since 2010 and is a member of expert team on the Information and Electronic Transaction Act of Lampung Regional Police since 2010. Recently, he is active as a reviewer and editor of several reputable international journals indexed by Scopus and Web of Science. He also becomes a reviewer of the indexed national journals.

Institut Teknologi dan Bisnis (ITBis) Lembah Dempo

Institut Teknologi dan Bisnis (ITBis) Lembah Dempo is a private university in Pagar Alam City, South Sumatra, which is a merger of three colleges, STIE Lembah Dempo, AMIK Lembah Dempo and STMIK Lembah Dempo under the auspices of the Yayasan Pendidikan Milenium (YPM) Lembah Dempo based on Decree of the Minister of Education and Culture of the Republic of Indonesia Number 946/M/2020 at October 6th, 2020.

ITBis Lembah Dempo has two faculties. First, the Faculty of Economics & Business which has three study programs, namely Management (S1), Digital Business (S1) and Accounting (D3). Second, the Faculty of Computer Science which has two study programs, namely Information Systems (S1) and Information Management (D3).

Vision :

Creating graduates who are superior and globally competitive both in technology and business-based entrepreneurship at 2035.

Mision :

1. Provide a conducive learning environment as a form of incubator to form an academic personality who is committed to the development of science and its application and has an entrepreneurial spirit to improve the welfare of the community.
2. Prepare human resource capabilities in the field of computer science based on entrepreneurship to support nation building and improve the quality of education and competence for nation building, through diploma, undergraduate, and postgraduate programs by utilizing technology and applying the principles of good organizational governance.
3. Carry out education, research, and community service by developing industrial networks, government and regulators as well as other relevant institutions, based on information technology and computer research.
4. Strive for independence in the implementation of the Tri Dharma of Higher Education through the development of quality-oriented management institutions and the ability to compete in the South Sumatra Region.

Rector	: Dr. Elvera, S.E., M.Sc.
Vice Chancellor 1	: Kusnita Yusmiarti, M.Kom.
Vice Chancellor 2	: Dr. Sastra Mico, S.E., M.Si.
Vice Chancellor 3	: Heriansyah, M.Kom.

Address :

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Website: www.lembahdempo.ac.id

MDP University

Starting as a course institution specifically oriented to provide training/courses on various computer application programs, MDP was founded on July 1, 1987 in the city of Palembang, precisely at Jalan Rupit No. 20. At that time there were only 2 computer laboratory facilities, and in November 1988 a branch was opened on Jl. Lieutenant Colonel Iskandar with 2 lab facilities. computer. Along with the development of the times, especially to meet the needs of skilled workers in the field of computersand to further improve services, the management of MDP decided from 7 May 1990 to move to a new location on Jl. Circle 1 No. 305 Palembang with a capacity of 6 (six) classes and better class facilities.

In order to meet the growing demands of the public who increasingly need an education system that is directed according to their field of work, starting in August 1993 the MDP Computer Education Center opened a Computer Expert Education (1 year program) equivalent to Diploma I (D1) with a choice of majors: Informatics Engineering , Computer Engineering, Computerized Accounting, Computer Graphic Design, and in 2000 added one major that is currently a trend in the internet world,namely the Department of E-commerce.

Based on the desire to participate in the development of the Republic of Indonesia, especially the development of people with integrity and ability in the field of Information Technology, the Multi Data Palembang Foundation plans to develop educational institutions at a higher level. This desire was finally realized with the issuance of the Decree of the Directorate of Higher Education of the Ministry of Education No. 189/D/O/2000, dated 7 September 2000, regarding the establishment of the MDP Computer and Informatics Management Academy and the granting of Registered Status for 2 (two) study programs, namely Information Management (D3) and Computer Engineering (D3). One year after the implementation of AMIK MDP, on July 5, 2001, the Decree of the Directorate of Higher Education of the Ministry of Education was issued no. 60/D/O/2001, regarding the establishment of the Palembang Multi Data Computer and Information Management College (STMIK GI MDP) and the granting of Registered Status to 2 (two) study programs, namely Informatics Engineering (S1) and Information Systems (S1). Complementing the existing study programs at STMIK GI MDP, on August 7, 2001 a license was issued for the implementation of 1 (one) new study program, namely the Computerized Accounting Study Program (D3).

On April 9, 2021, based on the Decree of the Minister of Education and Culture of the Republic of Indonesia No. 125/E/O/2021 concerning the Merger of AMIK MDP, STMIK GI MDP, and STIE MDP into Multi Data Palembang University.

STMIK Pringsewu

STMIK Pringsewu is the pioneer and the first institution of computer higher education in Pringsewu District, Lampung Province- Indonesia. STMIK Pringsewu is a private institution established by the Startech Foundation on April 28, 1994 (Computer Academy) and registered as STMIK Pringsewu on March 2008. STMIK Pringsewu as one of the Private higher education under the coordination of LLDIKTI in Region II.

In a span of 13 years since estabished, STMIK Pringsewu has undergone through several stages of development in its effort to produce graduates to meet the needs of human resources in the field of Information Technology (IT). Various initiatives and efforts have been made to make STMIK Pringsewu a reputable private higher education, not only in terms of produce the graduates, but also through the involvement of its academic staff in research and innovation.

STMIK Pringsewu contribution of International and National Publications able to bring to have a national publication rank (SINTA) in the field of information systems and information management placed to the top 90 rank for all higher education in Indonesia and bring STMIK Pringsewu into the best private hugher education in the Pringsewu Regency area. Based on the clustering rank of the Ministry of Education (Kemdikbud) in 2020, STMIK Pringsewu reaching 14th rank out of all universities in the province of Lampung. STMIK Pringsewu also dedicates to preparing superior and reliable human resources to be a great leaders of the nation and have entrepreneurial abilities as a solution for future civilizations.

Henceforth, with strategically located in Pringsewu regency institution STMIK Pringsewu have B accreditation provide a bachelor's degree program (S1) in information systems and diploma (D3) program in information management that is well-placed to become a major higher education institution with an emphasis on serving needs in the field of information technology. STMIK pringsewu vision committed to provide an excel higher education in the field of Information Technology in the application of Multimedia and has the ability to entrepreneurship in Lampung in 2024. STMIK Pringsewu places training, research and development

CONFERENCE SCHEDULE
The 1st Global Conference on Digital Technology and Information System (GCoDTIS) 2021 (Thursday, August 5th, 2021)
Join Zoom Meeting Here
Meeting ID: 991 4453 3738
Passcode: 762411

Time Jakarta Time (UTC +7)	Duration (Minutes)	Program	Chairperson
Opening Ceremony			
07.00-08.00	60”	Preparation and Technical Checking on Internet Connection	Committee
08.00-08.05	5”	Opening	MC
08.05-08.10	5”	Singing National Anthem: “Indonesia Raya”	Committee
08.10-08.20	10”	Praying	Suratno, S.Pd.I., M.H.
08.20-08.40	10” 10”	Welcoming Speech: 1. Chairman of Committee 2. Rector of IIB Darmajaya	1. Dr. Sri Lestari 2. Ir. Firmansyah Yunialfi Alfian, MBA., M.Sc
08.40-08.50	10”	Welcoming Speech by Head of National Higher Education Institution (LLDIKTI) Region 2	**Prof. Yuliansyah, Ph.D Akt.**
08.50-09.00	10”	Welcoming Speech by Governor of Lampung Province	Ir. Fahrizal Darminto, M.A.
09.00-09.10	10”	MoU Signing between National Higher Education Institution and IIB Darmajaya	1. MC 2. Rector of IIB Darmajaya 3. Head of LLDIKTI Region 2
09.10-09.15	5”	Closing Ceremony	MC
09.15-09.30	15”	Break	
Keynote Speeches Session			
09.30-09.35	5”	Opening (Introducing All Keynote Speakers)	Moderator
09.35-09.55	20”	Dr. Rahayu Ahmad (University Utara Malaysia)	Keynote Speaker
09.55-10.15	20”	**Assoc. Prof. Dr. Masoud Mohammadian** (Canberra University)	Keynote Speaker
10.15-10.35	20”	Prof. Dr. Parmanand Astya (Sharda University, India)	Keynote Speaker
10.35-10.55	20”	Assoc. Prof. Dr. Serhat Duman (Bandirma University, Turkey)	Keynote Speaker
10.55-11.15	20”	Dr. Muhammad Said Hasibuan (Institute of	Keynote Speaker

		Informatics and Business Darmajaya)	
11.15-11.55	40”	Discussion / Q and A	Moderator
11.55-12.00	5”	Closing	Moderator
12.00-13.00	60”	Lunch Break	
Parallel Session Presentation			
13.00-15.00	120”	Parallel Session I (8 papers - 15 minutes per paper)	Moderator & Authors
13.00-15.00	120”	Parallel Session II (8 papers - 15 minutes per paper)	Moderator & Authors
13.00-15.00	120”	Parallel Session III (8 papers - 15 minutes per paper)	Moderator & Authors
13.00-15.00	120”	Parallel Session IV (8 papers - 15 minutes per paper)	Moderator & Authors
15.00-15.15	15”	Coffee Break	
Closing Ceremony			
15.05-15.10	5”	Introducing Best Paper & Best Presenter Announcement	MC
15.10-15.15	5”	Closing Conference	MC

PARALLEL SESSION

ROOM 1
August 05th, 2021 (13.00-15.00 Jakarta Time, UTC +7)
Link Zoom Here
Meeting ID: 991 4453 3738
Passcode: 762411

Name of Presenter	Research Title	Affiliation	Name of Moderator
Ichsani Nurul Islam	DESIGN OF A SAFE SECURITY SYSTEM USING FINGERPRINT AND FACE RECOGNITION BASED ON NODEMCU	Jakarta Global University	Sri Rahayu
Hengki Muradi	SPATIAL AUTOREGRESSIVE MODEL OF PANEL DATA FOR POVERTY MODELING IN JAVA ISLAND	National Institute of Science and Technology	
Farid M kamal, Ariep Jaenul	DESIGN OF MICROSTIP ANTENNA 3,5 GHZ FOR WIRELESS FIDELITY (WIFI) USING CST MICROWAVE STUDIO	Jakarta Global University	
Sita Muharni	CHILDREN'S MALNUTRITION DIAGNOSE SYSTEM BASED EXPERT SYSTEM	STMIK Dharma Wacana	
Ratna Nurhaya	DECISION SUPPORT SYSTEM FOR STUDY PROGRAM SELECTION AT IBI DARMAJAYA LAMPUNG WITH THE DESCISION TREE METHOD	Institut Informatika dan Bisnis Darmajaya	
Oktavia Kristiana	ANALYSIS OF INFORMATION TECHNOLOGY GOVERNANCE IN SMK KH. GHALIB PRINGSEWU USING COBIT 2019 FRAMEWORK	Institut Informatika dan Bisnis Darmajaya	

ROOM 2
August 05th, 2021 (13.00-15.00 Jakarta Time, UTC +7)
Link Zoom Here
Meeting ID: 991 4453 3738
Passcode: 762411

Name of Presenter	Research Title	Affiliation	Name of Moderator
Miswan Gumanti	DESIGN OF COMMUNITY SATISFACTION APPLICATIONS SERVICE MANAGEMENT AT THE POPULATION AND CIVIL REGISTRATION OFFICE OF TANGGAMUS DISTRICT	STMIK Pringsewu	M. Said Hasibuan
Dr. Bilal Ahmad Sheikh	EFFECTS OF INFORMATION AND COMMUNICATION TECHNOLOGY ON ONLINE TEACHING AND LEARNING PRACTICES AMONG COLLEGE STUDENTS DURING COVID 19 PANDEMIC	Sheri e Kashmir University of Agricultural Science and Technology of Kashmir	
Febri Sugandi	IMPLEMENTATION OF *GAUSSIAN FILTERING* METHOD TO REDUCE *NOISE* IN DIGITAL IMAGE PROCESSING	Institut Informatika dan Bisnis Darmajaya	
Dwi Yana Ayu Andini	SECURITY RISK ASSESSMENT ANALYSIS ACADEMIC INFORMATION SYSTEM	Institut Informatika dan Bisnis Darmajaya	
Tri Aristi Saputri	IMPLEMENTATION OF MODULAR MULTIPLICATION BASED BLOCK CIPHER ON CHAT SOFTWARE	STMIK Dharma Wacana	
Ariep Jaenul, Anas Fahim Mubarok	DESIGN OF YAGI ANTENNA AS GSM/CDMA MODEM SIGNAL AMPLIFIER AT 900 MHZ FREQUENCY USING CST MICROWAVE STUDIO	Jakarta Global University	

ROOM 3
August 05th, 2021 (13.00-15.00 Jakarta Time, UTC +7)
Link Zoom Here
Meeting ID: 991 4453 3738
Passcode: 762411

Name of Presenter	Research Title	Affiliation	Name of Moderator
Siti Mukodimah	COMPARISON OF TREE, LOGISTIC REGRESSION, AND RANDOM FOREST METHODS FOR DETECTING IRIS TYPES	STMIK Pringsewu	Sri Lestari
Margi Prasojo	PREDICTION OF VOCATIONAL SCHOOL STUDENTS' ABILITY TO ENTER THE JOB MARKET BASED ON ASSESSMENT USING DATA MINING TECHNIQUES AT SMKN 1 KOTA AGUNG TIMUR	Institut Informatika dan Bisnis Darmajaya	
Muhamad Muslihudin	DECISION SUPPORT SYSTEM DETERMINATION OF CUSTOMER SATISFACTION LEVEL OF ORIFLAME PRODUCTS WITH ANALYTIC HIERARCHY PROCESS METHOD	STMIK Pringsewu	
Lina Gozali	DETERMINATION OF THE BEST FORECASTING METHOD FROM MOVING AVERAGE, EXPONENTIAL SMOOTHING, LINEAR REGRESSION, CYCLIC, QUADRATIC, DECOMPOSITION AND ARTIFICIAL NEURAL NETWORK AT PACKAGING COMPANY	Universitas Tarumanagara	
Nurkardina Novalia	FACTORS OF EXCELLENCE AND CUSTOMER NEEDS TO THE MARKETING PERFORMANCE OF PRIVATE UNIVERSITIES IN BANDAR LAMPUNG	Universitas PGRI Palembang	
Prilian Ayu Minarni	COMPARISON OF CLASSIFICATION METHODS IN DETERMINATION OF NUTRITIONAL STATUS BASED ON BODY WEIGHT INDEX BY AGE OF TODDLER IN WATES HEALTH CENTER	Institut Informatika dan Bisnis Darmajaya	

ROOM 4
August 05th, 2021 (13.00-15.00 Jakarta Time, UTC +7)
Link Zoom Here
Meeting ID: 991 4453 3738
Passcode: 762411

Name of Presenter	Research Title	Affiliation	Name of Moderator
Muhammad Andika P Poetra	DETECTING PLAGIARISM IN TEXT DOCUMENTS USING CLUSTERING	Institut Informatika dan Bisnis Darmajaya	M. Dwiyan Aditya
Christ Andreano	COMPARISON OF PERFORMANCE ANALYSIS OF LINEAR REGRESSION, NEURAL NETWORK, AND GENERALIZED MODELS FOR CPU PERFORMANCE PREDICTION	Institut Informatika dan Bisnis Darmajaya	
Ery Hartati	KOREAN LETTER HANDWRITING RECOGNITION USING CONVOLUTIONAL NEURAL NETWORK METHOD VGG-16 ARSITEKTUR ARCHITECTURE	Universitas MDP	
Agus Suryana ST.,MTI	PERFORMANCE ANALYSIS BIAS INTERPRETATION AUTOMATIC DETECTION OF DEPRESSION STUDENTS FACES IN THE ONLINE LEARNING PROCESS	STMIK Pringsewu	
Wijang Widhiarso	GROUP ADVANCED INFORMATION ECONOMIC (G-AIE) MODEL FOR E-GOVERNMENT PROJECTS EVALUATION	Universitas Multi Data Palembang	
Tri Susilowati	PROTOTYPE DECITION SUPORT SYSTEM TO DETECT DISASTER PRONE AREAS WITH SAW METHOD (TANGGAMUS DISTRICT CASE STUDY)	STMIK Pringsewu	

ROOM 5
August 05th, 2021 (13.00-15.00 Jakarta Time, UTC +7)
Link Zoom Here
Meeting ID: 991 4453 3738
Passcode: 762411

Name of Presenter	Research Title	Affiliation	Name of Moderator
Fransiska Prihatini Sihotang	IMPLEMENTATION OF THE WEIGHTED PRODUCT (WP) METHOD IN THE DECISION SUPPORT SYSTEM FOR GIVING EMPLOYEE INCENTIVE	Universitas Multi Data Palembang	herli Trisnawati
Bernadhita Herindri S. Utami	ANDROID-BASED PROBABILITY AND STATISTICS E-LEARNING APPLICATION ON STMIK PRINGSEWU	STMIK Pringsewu	
raden arya putra martallata	RISK ASSESSMENT ANALYSIS ON THE USE OF ACADEMIC INFORMATION SYSTEMS AT SMA N 6 BANDAR LAMPUNG USING THE OCTAVE ALLEGRO . METHOD	Institut Informatika dan Bisnis Darmajaya	
Nurfaika	MAPPING OF SHALLOW GROUNDWATER POTENTIAL BASED ON GEOGRAPHIC INFORMATION SYSTEMS IN LIMBOTO REGENCY, GORONTALO PROVINCE	Universitas Negeri Gorontalo	
Suyono	DESIGN OF EXPERT SYSTEM FOR COVID-19 DIAGNOSIS USING *CERTAINTY FACTOR METHOD IN PRINGSEWU REGENCY*	STMIK Pringsewu	
Aafaq Ahmad Rather	A NEW GENERALIZATION OF QUASI LINDLEY DISTRIBUTION	Annamalai University	

ABSTRACT

DESIGN OF A SAFE SECURITY SYSTEM USING FINGERPRINT AND FACE RECOGNITION BASED ON NODEMCU

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Abstract

Purpose: The purpose of this research is to design a security system by using fingerprint and face recognition based on NodeMcu.

Research Methodology: This study designs a secure and layered security system using fingerprint and facial recognition controlled by NodeMcu. Fingerprint is used as the first security used in this system. Furthermore, by using face recognition as a double security in this system. In this study Face recognition using viola and jones methods.

Results: The results obtained in this study show that the fingerprint test works actively, this can be seen from the output voltage issued. In addition, Face detection can work well with a range of 3 - 10 cm, but above 20 cm cannot detect objects. And other components such as LCD, LED, and Buzzer can work properly according to the specified object.

Limitations: This research is only limited to giving approval and rejection of data that has been previously stored. And this system is very dependent on distance, angle, and lighting during the detection process.

Contribution: This research can be useful for various sectors that need security systems

Keywords: *Security system, face recognition, nodemcu, viola and jones method*

SPATIAL AUTOREGRESSIVE MODEL OF PANEL DATA FOR POVERTY MODELING IN JAVA ISLAND

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Abstract

Purpose: One of the models that can be developed to improve the accuracy of the model is to include spatial effects in the model, especially in the implementation for panel data

Research Methodology: The dependent variable is the level of poverty, while the independent variable consists of; district/city minimum wage, inflation, gross regional domestic income, and human development index. Data on poverty variables and their covariates are limited to districts/cities in Java for the period 2015-2018. Data were analyzed using the SARS model fixed effects of panel data.

Results: The results showed that the panel data SAR model with region and time fixed effects was the best model with R^2 = 99.43% and the smallest AIC and BIC values and in the model there was no autocorrelation problem. The estimated parameter = 0.238 and p-value = 0.013 <0.05, which means that at the 5% real level, there is a significant influence between regions on the poverty level in Java for the 2015-2018 period. The UMK variable and the GRDP variable have a positive contribution to the poverty level in Java, while inflation and HDI variables have a negative but are not significant.

Limitations: This study is limited to the use of fixed effect panel data SAR models

Contribution: This research can be used as a reference in research about level of poverty in Java and research on panel data SAR modeling with fixed effect

Keywords: *Spatial, Autoregressive, Panel data, Fixed Effect*

DESIGN OF MICROSTIP ANTENNA 3,5 GHZ FOR WIRELESS FIDELITY (WIFI) USING CST MICROWAVE STUDIO

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Abstract

Purpose: Designing a microstrip antenna so as to produce a good quality antenna so that it can be applied to Wireless Fidelity (WiFi) technology with a working frequency of 3.5 GHz using CST Microwave Studio.

Research Methodology: Making a microstrip antenna that can later be used in WIFI applications, designed at a frequency of 3.5 GHz with a square shape. Then the shape of the designed microstrip antenna will be analyzed using CST Microwave Studio software to obtain the antenna design parameters and the frequency of the antenna.

Results: The shape of the microstrip antenna with an omnidirectional radiation pattern used for WiFi gets the results of the optimization of the VSWR antenna of 1.127 dB, frequency of 3.50GHz, bandwidth of 134.4 MHz, and Return Loss (db) -24.446 which is obtained in the CST Microwave Studio software simulation.

Limitations: So that produce various kinds of patterns and polorisasi are different, which will be in force in the future as which ones are already in ket Ahui material which is easy in access . With the results of the calculation of the parameters obtained jara k minimal antenna that does not occur interference with a distance of 90m is simulated with software CST Microwave Studio with Return Loss (db) -24 446 .

Contribution: The growing need for access to internet wifi in public then appeared and widespread access to the Internet cost the ordinary in for. Of the problems in on the need to develop a design and manufacture of antennae Microstrip that can by easily prepared , have the functionality of high as well as cheap and affordable in its later development .

Keywords: *Microstrip Antenna, CST Microwave Studio, Wireless Fidelity (WiFi), VSWR, Bandwidth*

CHILDREN'S MALNUTRITION DIAGNOSE SYSTEM BASED EXPERT SYSTEM

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Abstract

Malnutrition is a nutritional status based on the weight index according to age which is a term for undernutrition and malnutrition. A child is said to be malnourished if the weight index by age is less than -3 SD Ministry of Health, 2011). The data owned by the Trimurjo Public Health Center who suffered from malnutrition were found in with a total of 6 children who had medical records for children with malnutrition in 2020. The expert system with the Dempster Shafer Method was chosen because this method determines the solution to malnutrition in children. . With this website-based expert system, it will make it easier for parents to get information about the diagnosis of malnutrition in children as an initial prevention before going to a nutritionist and specialist doctor, because by using this diagnostic expert system application it will be more efficient in its use. For software development method using Rapid Application Development or RAD which consists of data collection, requirements planning, design workshop and Implementation. The expert system for diagnosing malnutrition in children can be further developed to use other methods. For more accurate calculations. It is hoped that this website-based expert system application can be developed into a mobile-based application so that more people use it.

Keywords: *Malnutrition, Dempster Shafer, Rapid Application Development, Expert System*

DESIGN OF YAGI ANTENNA AS GSM/CDMA MODEM SIGNAL AMPLIFIER AT 900 MHZ FREQUENCY USING CST MICROWAVE STUDIO

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Abstract

Purpose: The use of modems for the internet at this time is quite widespread but the reception is strong the signal is still a lot weak because it is located in a valley (basin) or far from BTS (Base Transciever Station) requires an antenna for that. With the Yagi Antenna with a frequency of 900 MHz as a modem signal amplifier, is expected to produce good signal quality.

Research Methodology: This research will make a modem signal amplifier antenna with modification of the Yagi type television antenna that operates at a frequency of 900 MHz. Modification process assisted by using CST Microwave Studio software to get parameters antenna design, gain and frequency of the antenna.

Results: The results of the research on the antenna feasibility test using simulation antenna CST Microwave Studio software obtained VSWR of 623,19167, Wavelength of 333.10 mm, gain increase of 6.208 dBi, overall the results of the simulation show simulasi that the designed antenna is feasible to be applied at a frequency of 900 MHz.

Limitations: The author analyzed several modem performance parameters and obtained the results performance improvement from medium and poor areas to excellent areas. This result shows that Yagi antennas can improve modem signal quality. However, the test cannot be carried out at a distance of more than 1km from the BTS.

Contribution: This study aims to determine the feasibility parameters of a yagi antenna in order to amplify the modem signal including Impedance, VSWR, and Gain increase and also This study aims to determine the performance such as RSSI, RSRP and RSRQ from modems GSM/CDMA, before using the Yagi antenna and after using the Yagi antenna.

Keywords: *Yagi Antenna, CST Microwave Studio, Modem*

DESIGN OF COMMUNITY SATISFACTION APPLICATIONS SERVICE MANAGEMENT AT THE POPULATION AND CIVIL REGISTRATION OFFICE OF TANGGAMUS DISTRICT

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Abstract

Purpose: This study aims to make a questionnaire application of community satisfaction with service management at the Department of Population and Civil Registration of Tanggamus Regency.

Research Methodology: This research is a descriptive qualitative research.

Results: This research produces an application that is able to provide optimal service from the service to the community.

Limitations: This research focuses on designing android-based applications.

Contribution: This research contributes to the discipline of information systems science.

Keywords: *application, android, service, questionnaire*

ANALYSIS OF INFORMATION TECHNOLOGY GOVERNANCE IN SMK KH. GHALIB PRINGSEWU USING COBIT 2019 FRAMEWORK

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Abstract

KH. Ghalib Vocational High SchoolPringsewu is an educational institution that strives to keep up with developments in implementing information technology. This Vocational High School, which has a variety of majors, must improve the technology management system to make it more advanced. However, at this time the technology governance applied has not been running as expected, this can be seen from users who do not understand the use of computer equipment/technology and there are no procedures for using and repairing technology, system operating failures, data loss by viruses. In this study the method used is the Cobit 2019 method withDomain Align, Plan and Organize(APO) and Domain Deliver, Service and Support(DSS). The results of the DSS05 maturity level are 1.56, while the lowest average value of the current condition is in APO07 of 1.45 where with these results the capability model level is at the stage of successfully implementing the IT process and the goal of the IT process is really achieved.

Keywords: *Cobit 19, Governance, IT Analytics*

IMPLEMENTATION OF *GAUSSIAN FILTERING* METHOD TO REDUCE *NOISE* IN DIGITAL IMAGE PROCESSING

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Abstract

Image smoothing is a variation of the intensity of a pixel that is not correlated with neighboring pixels that are easily seen by the eye because they look different. By performing image refinement, it is expected that the image will become more visible. In certain cases, image smoothing is done to smooth the surface of the image, such as removing small details. Gaussian filter is a mask that is also often used for image refinement, namely a gaussian smoothing mask. An increase in image quality can improve images that have very low quality with the presence of a gaussian filter.

Keywords: Quality , Image, Gaussian Filter, noise

EFFECTS OF INFORMATION AND COMMUNICATION TECHNOLOGY ON ONLINE TEACHING AND LEARNING PRACTICES AMONG COLLEGE STUDENTS DURING COVID 19 PANDEMIC

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ABSTRACT

Information and communication technology for learning practices among college students are an innovative platforms for learning in current times. The use of technology based teaching and learning should begin with proper implementation and support from higher authorities and stack holders of colleges. The implementation process of technology will result in huge success and benefits for both students and teachers, therefore the use of ICT during COVID 19 pandemic needs serious consideration in order to increase the competency of the countries education system and will help in increasing in world ranking of national education and will produce the best future work force during COVID 19 pandemic. The students and teachers should be guided by best experts of Information and communication technology regarding the usage of ICT in teaching and learning Process. The present study aims to evaluate the effects of Information and communication technology on College students amid COVID 19 pandemic, based on the survey data generated from 100 college students were analyzed and empirical details supporting the findings are discussed in the work.

Keywords: ICT, Teaching, Learning, Education and COVID 19 Pendamic.

DETECTING PLAGIARISM IN TEXT DOCUMENTS USING CLUSTERING

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Abstract

Document is a written text that is printed to be used as a description and also certain information. With the development of technology, it can make it easier for people to get information and also make it easier to do plagiarism. Where for now there are not many technologies that can detect the similarity of text documents, for that it is necessary to create an application system that can detect the similarity of text documents by applying the clustering method.

Keywords: *Clustering; Text Document;*

IMPLEMENTATION OF MODULAR MULTIPLICATION-BASED BLOCK CIPHER ON CHAT SOFTWARE

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Abstract

Communication is a very important social process in human life. Many communication tools can be used to interact and communicate remotely, for example chat applications. Chat application is one application that is often used in communication that allows users to send messages in real time to other users who are connected to the internet. MMB cryptography uses 128 bit plaintext and an iterative calculation consisting of linear steps (such as XOR and key applications). as well as the parallel application of four large reversible non-linear substitutions. This substitution is determined by a multiplication operation modulo 232 - 1 with a constant factor. The MMB method uses a 32 bit text subblock (x0, x1, x2, x3) and a 32 bit subblock key (k0, k1, k2, k3). A non-linear function, f, is applied six times along with the XOR function. The complexity of this algorithm, which lies in the multiplication operation process modulo 232 - 1, the calculation of the non-linear function f in the decryption and encryption process, as well as the reverse operation in the decryption process, makes this algorithm difficult to process manually. MMB to encrypt plaintext and decrypt ciphertext into original text which has been implemented into learning applications.

Keywords: Cryptography, MMB (Modular Multiplication-Based Block Cipher), block cipher, encryption, decryption, chat

COMPARISON OF TREE, LOGISTIC REGRESSION, AND RANDOM FOREST METHODS FOR DETECTING IRIS TYPES

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Abstract

Iris plant or iris flower is a type of flower that is part of the Iridaceae family which consists of 300 species. Iris flowers have a variety of striking colors and have a dominant color in each region. The many types of iris plants with almost the same physical characteristics, especially on the pistil and crown, cause errors in the detection of iris species. plant slices were deliberately used because the data is already available digitally on the internet and software such as orange and widely used as a material for object classification. This research was conducted to classify the types of iris plants using three algorithms, namely the Tree algorithm, Logistics Regression, and random forest. A classification algorithm is a learning method to predict the value of a group of attributes in describing and distinguishing data classes or concepts that aim to predict the class of objects whose class label is unknown. The results showed that the largest AUC (Area Under Curve) value was obtained by the Random Forest method. AUC accuracy is said to be perfect if the AUC value reaches 1,000 and poor accuracy if the AUC value is below 0.500. while for the precision value of the three models used, Random Forest has the highest precision value. From the data test that has been carried out by training and testing, it can be seen that the level of accuracy of the testing of the three models where the Random Forest model is superior as a method for classifying iris flowers.

Keywords: *Iris plant, Tree Algorithm, Logistic Regression, Random Forest, Classification*

PREDICTION OF VOCATIONAL SCHOOL STUDENTS' ABILITY TO ENTER THE JOB MARKET BASED ON ASSESSMENT USING DATA MINING

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Abstract

Vocational High School is a form of formal education unit that aims to prepare skilled workers ready to work in certain fields according to the needs of the community and the industrial world. However, not all SMK graduates can be accepted in a place of work that is in accordance with the expertise program for which they are competing. This study has a goal to predict student achievement to enter the job market based on data on general subject scores, vocational grades, attitude values, using data mining methods Linear Regression,. The research subjects were students of level XII of SMK Negeri 1 Kotaagung Timur Tanggamus Lampung totaling 101 students. Based on the results of the test using Rapid Minner, the results for the level of accuracy using Linear Regression methods are as follows: Linear Regression the average predictive value of work worthy students is 56.9% and the average predictive value of students is not worthy of work is 43.1%. From data processing using algorithms Linear Regression we can write the formula for Linear Regression as follows: Y = -0.053 x Attitude Value + 0.003 x Skill Value – 0.007 x US Score – 0.011 x Final Score + 6.860.

Keywords : Data mining Linear Regression Vocasional School

DECISION SUPPORT SYSTEM DETERMINATION OF CUSTOMER SATISFACTION LEVEL OF ORIFLAME PRODUCTS WITH ANALYTIC HIERARCHY PROCESS METHOD

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Abstract

In order to improve customer satisfaction with Oriflame products, customer satisfaction was studied. Find out how Oriflame can satisfy customers through its products, services, finances, delivery, and company conditions. In this research, information marketing research is needed to understand how customers behave and the criteria that are very important when deciding how customers make decisions about Oriflame products. At this stage of research, researchers analyze existing systems by conducting library research and direct observation. In order to calculate the customer satisfaction level, the AHP (Analytic Hierarchy Process) method is used. By using this decision support system, it is expected to make it easier for companies and sellers to determine customer satisfaction with Oriflame products.

Keywords: decision support system, customer satisfaction, AHP.

DETERMINATION OF THE BEST FORECASTING METHOD FROM MOVING AVERAGE, EXPONENTIAL SMOOTHING, LINEAR REGRESSION, CYCLIC, QUADRATIC, DECOMPOSITION AND ARTIFICIAL NEURAL NETWORK AT PACKAGING COMPANY

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Abstract :

PT. Peace Industrial Packaging is a company that produces Styrofoam and plastic bottles that are used as containers or places or commonly referred to as packaging used by other companies to place their finished products. After getting data on the number of requests and production results obtained every month then the data will be processed using several forecasting methods such as Single Moving Average; Double Moving Average; Weight Moving Average; Single Exponential Smoothing; Double Exponential Smoothing; Linear Regression; Quadratic Method, Method Cyclic; Decomposition Method; and Artificial Neural Network (ANN) Method. After conducting the research calculation, the following conclusions can be drawn. The right forecasting method used for the HBL 100 ML product is the ANN (Artificial Neural Network) method because it has the smallest error value, namely the MAD error method of 760.583554, the MSE error method of 863,032.834043, the SDE error method of 970.304264, the MAPE error method is 0.112530, and the MPE error method is 0.112530

FACTORS OF EXCELLENCE AND CUSTOMER NEEDS TO THE MARKETING PERFORMANCE OF PRIVATE UNIVERSITIES IN BANDAR LAMPUNG

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Abstract

Purpose: This study aims to test the influence of factors of excellence and customer needs on the marketing performance private universities in Bandar Lampung. Marketing performance model is influence by variable factors of excellence and customer needs.

Research Methodology: The data used in this study were collected by disseminating questionnaires both online and offline. The sample determination technique is stratified random sampling technique. The sample observed was private universities in Bandar Lampung with respondents being the head of the study program and students . Research model is estimated by using the Ordinary Least Square (OLS) approach to find out the effect of factors of excellence and customer needs on marketing performance

Results: The results of this study reveal the positive and significant effect of factors of excellence, while customer needs have no effect on marketing performance of private universities in Bandar Lampung

Limitations: The indicators used in the study have not been fully able to accommodate the activity size on each variable that corresponds to the facts in the field

Contribution: As input for private universities in formulating a competition strategy based on the factors of excellence and customer needs in improving marketing performance

Keywords: *factors of excellence, customer needs, marketing performance*

COMPARISON OF CLASSIFICATION METHODS IN DETERMINATION OF NUTRITIONAL STATUS BASED ON BODY WEIGHT INDEX BY AGE OF TODDLER IN WATES HEALTH CENTER

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Abstract

The growth and development of children is certainly one of the most important concerns for parents, especially in terms of balanced nutrition. Currently in Indonesia itself is still facing a double nutritional problem, namely deficiency and excess nutrition. In this study, identification of nutritional status will be carried out based on the weight index of toddlers according to age in toddlers using data mining techniques by comparing the Decision Tree, K-NN and Naïve Bayes Algorithms. The data in this study were obtained from posyandu-posyandu in the working area of the Wates Health Center, Pringsewu district. The results of the Decision Tree algorithm classification are the most recommended for the classification of nutritional status based on the weight index according to the age of toddlers in the working area of the Wates Public Health Center with an accuracy of 97.85%, an average class recall of 90.29, and an average class precision of 98. 56%. So that the results of this study will become a referencePublic Health Center for the Watesto determine the nutritional status of toddlers in the working area of the Wates Public Health Center quickly, effectively and efficiently.

Keywords: Comparison, Decision Tree, K-NN, Naïve Bayes, Nutritional Status

SECURITY RISK ASSESSMENT ANALYSIS ACADEMIC INFORMATION SYSTEM

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Abstract

The Academic Information System (SIAKAD) was created to facilitate the dissemination of academic information at higher education institutions. Aisyah Pringsewu University (UAP) currently has not implemented a risk assessment of the Academic Information System (SIAKAD). This causes potential security risks such as leakage of data, information, and technical disturbances that affect business processes within Aisyah Pringsewu University (UAP). The risk assessment at SIAKAD Aisyah Pringsewu University uses the Octave Allegro method and ISO 27002. In the Octave Allegro method there are 8 stages, the results of which are adjusted to the relevant ISO 27002 clause. The results of the calculation of the threat value of the Octave Allegro method found that the affected environment had the highest score for reliability and users, namely 38. Furthermore, the results of information security controls were applied in the ISO 27002 clause in each area of concern. Referring to the mitigation approach, the recommended Academic Information System (SIAKAD) security policy consists of SIAKAD Information Security Guidelines, SIAKAD Work Instructions, SIAKAD Security Procedures, SIAKAD Security Forms. This research still has shortcomings, namely the limitations of data obtained from users of the Academic Information System (SIAKAD), especially students. This study still has shortcomings, namely the limited data obtained from SIAKAD users, especially students.

Keywords : Penilaian Resiko; Octave Allegro; ISO 27002.

COMPARISON OF PERFORMANCE ANALYSIS OF LINEAR REGRESSION, NEURAL NETWORK, AND GENERALIZED MODELS FOR CPU PERFORMANCE PREDICTION

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Abstract

The Central Processing Unit or commonly referred to as the CPU is an electronic circuit that processes several arithmetic logical operation instructions, controls and input / output. A CPU has specifications that produce performance on the Central Processing Unit. Linear Regression Algorithm, Neural Network and Generalized Linear Model are approach algorithms that are supported by RMSE (Root Mean Square Error) calculations which have a function to obtain the magnitude of the error rate from the prediction results, where the smaller the closer the value to 0 then the RMSE value will be the more accurate the prediction value. CPU performance. The application of the three algorithms in finding the RMSE value uses the rapidminer tool and the dataset used is the CPU specification dataset obtained from the Dr. Github account. Ahmad Solichin. In this study, we will compare the use of Linear Regression algorithms, Neural Networks and Generalized Linear Models which are implemented on the CPU specification dataset that has been inputted to produce CPU performance predictions. The calculation results show that the Linear Regression algorithm with a value of RMSE 62,845, and the Neural Network algorithm with a value of RMSE 52,800, while the Generalized Linear Model algorithm with a value of RMSE 59,956. Based on the prediction calculations by the three algorithms, it can be concluded that the RMSE value in the Neural Network algorithm shows the best calculation with the lowest RSME value.

Keywords: Central Processing Unit (CPU), Logistic Regression, Linear Regression, General Linear Model

DECISION SUPPORT SYSTEM FOR STUDY PROGRAM SELECTION AT IBI DARMAJAYA LAMPUNG WITH THE DESCISION TREE METHOD

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ABSTRAK

Decision-making is a key part of every human being's life. The common problem in decision making is that information is insufficient, inaccurate, unable to analyze problems and many others. Students' decisions are sometimes influenced by the opinions of parents, friends or idolized figures. Therefore, a Decision Support System is required that can assist high school students in choosing the appropriate course. In this study the authors created the Classification Method, Descision Tree model by using Tree Algorithm then the results will be evaluated using KNN Algorithm to know the accuracy level of the proposed model compared to the comparison model. With the application of Tree. expected to provide solutions for prospective students in determining the appropriate courses that will be taken by prospective students during the study so that the opportunity to suskes in study in the selected department is greater.

Keywords: Decision Support System, Classification, Descision Tree. KNN

PERFORMANCE ANALYSIS BIAS INTERPRETATION AUTOMATIC DETECTION OF DEPRESSION STUDENTS FACES IN THE ONLINE LEARNING PROCESS

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Abstract

Student quality assurance program in learning is crucially implemented continuously, one aspect of research management quality assurance information system department is automatic interpretation bias (AIB) as the main contributor to changes in student mood in the focus of mind and level of *absorption of students during education. Online learning is* very challenging to research using computer vision technology that detects students' faces containing important information. A lot of 253 student facial images have been selected and collected to *be analyzed in depth as a material for the study and development of the quality* of learning of students of the high school of informatics and computer management (STMIK Pringsewu)

Keywords: Cognitive Theory, Depression, Student face detection, Automatic interpretation bias .

GROUP ADVANCED INFORMATION ECONOMIC (G-AIE) MODEL FOR E-GOVERNMENT PROJECTS EVALUATION

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Abstract

The different methods, criteria, and methods of evaluating the feasibility of e-government project investment carried out by the government have created several challenges. The feasibility of an e-government project investment that is unique is evaluated using a method that does not take into account the uniqueness factor, so the results are not optimal.

Several problems will occur if the evaluation method used by the government is used to evaluate ICT projects, namely: the evaluation method and criteria used by the government are difficult to reveal risks, rates of return, costs, and benefits (tangible benefits and intangible benefits); the methods and criteria used by the government to evaluate the investment feasibility of e-government projects are difficult to predict the risk.

This paper presents a G-AIE model for evaluating the investment feasibility of e-government projects that can reveal risks, returns, costs, and benefits, predict risks and accommodate groups of decision-makers in the government so that the resulting decisions can be more objective, empirical, measurable, and accountable. The G-AIE model also has a reference to benefits and risks as well as an assessment method that can be used as a Decision Maker (DM) guide to evaluate ICT project investments.

Based on the results of testing the G-AIE model to evaluate four (4) proposed ICT project investments, it is known that the project that has the highest value of the benefit (ROI) and weight value is project C which has the main priority for investment.

Keywords: *G-AIE, E-government Projects, Benefit, Risk, Cost*

KOREAN LETTER HANDWRITING RECOGNITION USING CONVOLUTIONAL NEURAL NETWORK METHOD VGG-16 ARSITEKTUR ARCHITECTURE

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Abstract

Handwritten is an unique characteristics because each people has different handwriting. Handwritten can be an object to recognition of someone. In research on handwritten Korean alphabet recognition using Convolutional Neural Network method with VGG-16 architecture. Data is scanned from 24 Korean handwritten alphabets with 14 kinds of consonant and 10 kinds of vocal on paper with black ink. Data there are two scenarios namely research using original data without binarization and data with binarization which for both scenarios are previously data has been resized. This research uses k-fold cross validation with value for k=5 and confusion matrix. The result showed that both of scenarios are can be recognized with 99,52% accuracy, 95,56% precision, 94,11% recall for first scenario and 99,42% accuracy, 95,94% precision, 93,11% recall for second scenario.

Keywords—*Handwritten, Korean Alphabet, VGG-16*

RISK ASSESSMENT ANALYSIS ON THE USE OF ACADEMIC INFORMATION SYSTEMS AT SMA N 6 BANDAR LAMPUNG USING THE OCTAVE ALLEGRO. METHOD

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Abstract

Technological developments in meeting information needs have been carried out at SMA N 6 Bandar Lampung where there are various information systems used in managing information as a basis for creating quality services and supporting optimization in work processes. However, apart from the benefits obtained, utilizing information on information systems that can be obtained, one of which is information security which is an important asset for organizations that need to be maintained and owned. In an effort to maintain and protect information security, it is necessary to conduct an evaluation in order to anticipate and anticipate risks that can disrupt information security. This study aims to analyze the risk assessment of the use of academic information systems as a very crucial information system in a school. This risk analysis uses the Octave Allegro method with a focus on information assets which consists of 8 steps and is arranged in 4 stages starting with determining drivers, developing an information asset profile, identifying threats, and identifying and mitigating risks. The results of this study are 10 (ten) areas of concern with a mitigation approach (seven) risks that must be mitigated, 2 (two) risks that can be assured (defer), and (one) risk. which is acceptable. From the risk assessment carried out, recommendations are given to prevent/minimize security risks in an effort to maintain and improve information.

Keywords : Information Technology, Information Systems, Information Security, Assets, Risk Assessment, Octave Allegro.

IMPLEMENTATION OF THE WEIGHTED PRODUCT (WP) METHOD IN THE DECISION SUPPORT SYSTEM FOR GIVING EMPLOYEE INCENTIVE

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Abstract

Purpose: Create a decision support system for calculating incentive based on the criteria desired by the company and determine the nominal incentive based on calculations using the Weighted Product (WP) method.

Research Methodology: This system was developed using an iterative methodology. The website was created using Visual Studio Code. Using PHP programming language and MySQL as the DBMS

Results: Speed up and reduce employee incentive calculation errors.

Limitations: The system is analyzed for use at PT SJP according to the existing problems.

Contribution: Enrich knowledge about decision-making to determine employee incentive.

Keywords: *Decision Support System, Bonus, Incentive, Weighted Product*

ANDROID-BASED PROBABILITY AND STATISTICS E-LEARNING APPLICATION ON STMIK PRINGSEWU

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Abstract

Purpose: This study aims to create an e-learning application for statistics and probability.

Research Methodology: This research is a descriptive qualitative research.

Results: This research produces an application that is able to provide convenience for lecturers and students.

Limitations: This research focuses on designing android-based applications.

Contribution: This research contributes to the information systems discipline.

Keywords: aplikasi, android, e-learning

PROTOTYPE DECITION SUPORT SYSTEM TO DETECT DISASTER PRONE AREAS WITH SAW METHOD (TANGGAMUS DISTRICT CASE STUDY)

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Abstract

Most of Tanggamus regency is a disaster-prone area, such as floods, landslides, earthquakes, and so on. To determine the area that is really potentially catastrophic is something complicated and the determination process there are many errors, because the determination process is based on subjectivity. In this case it is most likely that the area that is really potential for disaster does not enter into the territory prioritized by the government to be given socialization of insights about disasters or reduce the risk of disasters. This paper discusses the Simple Additive Weighting (SAW) method that can be used in determining disaster-prone areas in Tanggamus Regency. The area to be designated as a disaster-prone area has criteria that have been set. Criteria needed include: Flood disaster data, landslide disaster data, earthquake disaster data, tsunami disaster data, and fire disaster data. The result of this system is a list of disaster-prone areas that comply with the criteria specified as areas of special attention from local governments.

MAPPING OF SHALLOW GROUNDWATER POTENTIAL BASED ON GEOGRAPHIC INFORMATION SYSTEMS IN LIMBOTO REGENCY, GORONTALO PROVINCE

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Abstract

Limboto district is part of the Gorontalo Groundwater Basin in Gorontalo Regency and is now a center of population growth, economy, and development. The geological formation and physical characteristics of the area affect the properties of the aquifer system and local groundwater potential. Limboto regency is an area traversed by the main Gorontalo fault line, and it is also where Lake Limboto is located. These phenomena indicate a complex and unique geological process and implications for groundwater potential of the local area.

This study aimed to examine for groundwater potential mapping. The research method used is a survey method, namely by making direct observations and measurements in the field. The sampling technique used is systematic random sampling for monitoring shallow groundwater or well water. Data analysis was carried out using a deterministic method based on geographic information systems.

The results showed that based on shallow groundwater depth data, the research location in the southern part or in the area around Lake Limboto had high groundwater potential, while in the northern part of the study site the groundwater potential was moderate to low. Based on the parameters of the physical condition of groundwater or dug well water, in general the research site has the potential for poor groundwater quality, and is not recommended for use in meeting drinking water needs.

DESIGN OF EXPERT SYSTEM FOR COVID-19 DIAGNOSIS USING *CERTAINTY FACTOR* METHOD IN PRINGSEWU REGENCY

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ABSTRACT

Covid-19 is a widespread disease caused by the virus. Covid-19 is a widespread disease that generally causes death. Generally covid-19 late in the stated. In this research, the author invites people to identify and respond to the disease. The covid-19 assessment expert system is an expert system designed as an assessment aid with a dynamic knowledge base. Expert system refers to pc system that can reason about experts with certain reliable knowledge. The expert system can take over the position of the expert, as well as the principle of working experts can share certain results, such as that of the expert. The expert system wants to show the indication options that can be selected by the user, where each indication option wants to center the user to the next indication option until it obtains the final result. In the final result, the system wants to show indications as well as diseases of the user's options. The system shares the results in the form as follows: while using the system, it may be a disease that the user feels when responding to problems while consulting, the percentage of trust, and the value of trust given by the user.

Purpose: This study aims to create an expert system model to detect patients suspected of exposure to the covid 19 outbreak so as to assist medical personnel and paramedics in the handling of the covid 19 outbreak .

Research Methodology: Expert System, Certainly factor method and excel aplication

Results: Design model and application of covid 19 detection expert system for covid 19 indicated patient handlers

Limitations: The study was conducted in the even semester of 2021

Contribution: Assisting the local government of pringsewu district in preventive and curative efforts of the pandemic covid 19 outbreak as well as creating an expert system model for medical personnel and paramedics of public hospitals in pringsewu district

Keywords: Expert system for detction covid 19, CERTAINTY FACTOR METHOD, local government of pringsewu district.

A NEW GENERALIZATION OF QUASI LINDLEY DISTRIBUTION

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Abstract: In the present paper, we introduce a new model of quasi lindley distribution using the length biased technique known as Length biased quasi lindley distribution. We have obtained the different statistical and mathematical properties of the newly introduced distribution. We also have obtained its parameters by applying the maximum likelihood estimation technique and also discussed its Fisher information matrix. Finally a newly proposed model is demonstrated with an application to illustrate the superiority of model in modelling the real life time data.

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