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JURNAL PENELITIAN POS DAN INFORMATIKA (JPPI) Terbit pertama kali tahun 2011 dengan frekuensi terbit dua kali dalam setahun pada bulan September dan Desember. Jurnal ini bertujuan untuk mengembangkan dan meningkatkan pengetahuan serta menjadi wadah tukar pikiran bagi peneliti, akademisi, dan praktisi khususnya dalam bidang perposan, penyiaran, telekomunikasi, dan informatika. Artikel yang dapat diterbitkan adalah dalam bentuk makalah akademik, laporan penelitian, survei, *briefing* penelitian, tesis, analisis data sekunder, pikiran, teoritis konseptual ulasan, metodologis di lapangan yang bersifat asli dan belum pernah dipublikasikan di media lain.

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FOREWORD FROM EDITOR-IN-CHIEF

Jurnal Penelitian Pos dan Informatika (JPPI) is published by the Centre for Research and Development on Resources, Equipment, and Operations of Posts and Informatics, as part of the Ministry of Communications and Informatics of the Republic of Indonesia. Since this journal has been nationally accredited as a Grade 2 (S2) journal in Science and Technology Index (SINTA) from the Ministry of Research, Technology, and Higher Education of the Republic of Indonesia, thus, our next target is to serve and influence more communities by upgrading the journal to an international journal, which then makes this journal eligible to be accredited as a Grade 1 (S1) journal. Preparing for the upgrade, hence, we publish this issue as the first issue of JPPI in fully English.

The first paper, *Quality Evaluation of Pasuruan Regency Office Of Education's Website Using Webqual 4.0 Framework and Importance Performance Analysis (IPA)*, evaluated the website of Education Department of Pasuruan Regency in order to arrange improvement recommendations to meet the ideal website quality, using Importance Performance Analysis. The second paper, *Information Technology Strategic Plan Using Ward and Peppard Method*, performed an information strategy formulation based on Ward & Peppard framework to improve data processing and information system in Vocational College Bogor Agricultural University (IPB). The third paper, *Comparation Analysis of Ensemble Technique With Boosting(Xgboost) and Bagging (Randomforest) For Classify Splice Junction DNA Sequence Category*, found that the combination of xgboost and randomforest method with right parameter settings are highly effective in classifying DNA sequence splice junction type.

The fourth paper, *Development Strategy for Telematics Small and Medium Industries In Indonesia*, concluded strategies for five industry groups which were mapped into four developing quadrants, then gave special attention to human resource development. The fifth paper, *Online Realtime Sentiment Analysis of Tweets by Utilizing Streaming API Features From Twitter*, built a system which can analyze sentiment from social media in realtime and display the result in graphical form. The last paper, *Comparative Analysis of Broadband Internet Development for Digital Economy in China and Indonesia*, formulated recommendations for Indonesian government to make further plans, strategies, and regulations of broadband Internet, after comparing broadband internet development for digital economy in China and Indonesia.

Since the first volume, our journal provides discretion in financial term by waiving the article processing charge. We wish to offer our thanks to the Centre for Research and Development on Resources, Equipment, and Operations of Posts and Informatics for their continuing the kind of support. Also, we would like to acknowledge our immense gratitude to our Editorial Board members, reviewers, and authors.

We hope this publication would contribute to the enhancement of science, technology, and policy.

Jakarta, September 2019

Editor-in-Chief

Lembar Abstrak

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Admaja Dwi Herlambang, Rizki Widya Priyangga, Niken Hendrakusma Wardani

Quality Evaluation of Pasuruan Regency Office of Education's Website Using Webqual 4.0 Framework and Importance Performance Analysis (IPA)

Jurnal Penelitian Pos dan Informatika Vol. 9 No. 1, halaman 1 – 12

ABSTRACT

The purpose of the evaluation is to find out the quality of usability, information quality, and service interaction quality of Pasuruan Regency Office of Education's website. The Sample was 100 respondents from a population of website users, with simple random sampling technique. Data was obtained from dissemination of questionnaires which were then analyzed using descriptive statistics and calculation of Importance Performance Analysis (IPA). The results of the descriptive statistics pointed out that all three variables were included in the high category. The value of variable gap usability was of -0.35, information quality of-0.32, and service quality of interaction of -0.36. Based on these results, it is concluded that the website has not been able to fulfill the ideal quality as expected by users. Indicators that need improvements include website color design for more comfort to the eyes of users, types and sizes of fonts for more readability, background color to provide contrasts to the font color, up to date information, information useful for user, ease of communication with other organizations, and speed of response and comment.

Keywords: evaluation, usability, information quality, service interaction quality, website, office of education

Ringga Gilang Baskoro, Yani Nurhadryani, Bagus P Purwanto

Information Technology Strategic Plan Using Ward and Peppard Method (A Case Study Of The Diploma Program of IPB University)

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ABSTRACT

Te Vocational School of IPB University has utilized information technology (IT) to support its business process. The problem is the existing information technology has not been effective in supporting the main business process. Improvements are needed for the components of data processing and information systems. Applying information technology aligned with the needs of business processes requires a plan to minimize the occurrence of failure in the implementation phase. IT strategic plan plays important role as guidelines and directions for IT operation in an organization. The stages of IT strategic plan are performed based on Ward and Peppard framework. IT strategic plan formulated in this study consists of some components such as application portfolio, IT management strategy, and IT architecture recommended for the Vocational School of IPB University .

Keywords*: information technology, information system, strategic plan, vocational college, Ward and Peppard.*

Iswaya Maalik S, Wisnu Ananta Kusuma, Sri Wahjuni

Comparation Analysis of Ensemble Technique With Boosting(Xgboost) and Bagging (Randomforest) for Classify Splice Junction DNA Sequence Category

Jurnal Penelitian Pos dan Informatika Vol. 9 No. 1, halaman 27 – 36

ABSTRACT

Bioinformatics research is currently undergoing a rapid growth, supported by the development of computation technology and algorithm. Ensemble decision tree is a common method for classifying large and complex dataset such as DNA sequence. Combining the implementation of two classification methods like xgboost and random Forest with ensemble technique might improve the accuracy result on classifying DNA Sequence splice junction type. With 96.24% accuracy for xgboost

and 95.11% for Random Forest, the study suggests that both methods, using the right parameter setting, are highly effective tools for classifying DNA sequence dataset. Analyzing both methods with their characteristics will give an overview on how they work to meet the needs in DNA splicing.

***Keywords**: DNA splice site junction, ensemble technique, extreme gradient boosting, grid search hyperparamater optimization, random forest.*

Eneng Tita Tosida, Hermawan, Fredi Andria, Irfan Wahyudin, Taufik Djatna

Development Strategy for Telematics Small and Medium Industries in Indonesia

Jurnal Penelitian Pos dan Informatika Vol. 9 No. 1, halaman 37 – 52

ABSTRACT

The telematics industry is included in the national industry development policy. Electronic and Telematic Industries are projected to grow twofold by 2025. The telematics industry is also included in the Nine Priority SMEs for development. The telematics industry is even part of the creative industry that absorbs about 13,000 workers. The national telematics industry is grouped into five groups, namely the office equipment industry, software, animation, games, and embedded. The strategy for developing Telematics SMEs is based on the position of the industry in its strength map. The five industry groups have been mapped into 4 developing quadrants. The office equipment industry is included in quadrant 1, with an expansive strategy such as increasing production and market share. The game and embedded industries map into quadrant 2, the strategy developed is proactive such as strengthening promotion and innovation. The software industry enters quadrant 3, the strategy developed is consolidation, such as strengthening human resources, infrastructure, and business institutions. While the animation industry entered quadrant 4, the strategy developed was to defensive, namely managing production cost efficiency, strengthening the domestic market, and increasing the competency of human resources. Human resource development has received special attention in the development of telematics SMEs. The skills of human resources in the telematics business may not be doubted, but recognition of competencies is a distinguishing factor in efforts to provide quality assurance to customers.

Keywords : Developing Strategy, Telematics SMEs, Industry Mapping, Classified MSQA

Bahrawi

Online Realtime Sentiment Analysis of Tweets By Utilizing Streaming API Features From Twitter

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ABSTRACT

Twitter is one of the social media that has a simple and fast concept. Because it is a short message, news or information on Twitter can be more easily digested. This social media is also widely used as an object for researchers or industry to conduct sentiment analysis in the fields of social, economic, political, or other fields. Opinion mining or also commonly called sentiment analysis is the process of analyzing text to get certain information in a sentence in the form of opinion. Sentiment analysis is one of the branches of the text mining science. Text mining is a natural language processing technique and an analytical method that is applied to the text data to obtain relevant information. Public opinion or sentiment in twitter is very dynamic and fast changing; a real-time sentiment analysis system is needed. It is automatically updated continuously so the changes can always be monitored, anytime and anywhere. This research builds a system to analyze the sentiment from twitter in real-time, automatically, and continuously. The results of the system trial succeeded in drawing data, conducting sentiment analysis, and displaying it in graphics and real-time website, and updated automatically. Furthermore, this research will be developed with a focus on the accuracy of the algorithms used in conducting the sentiment analysis process.

***Keywords**: sentiment analysis, twitter, opinion mining, text mining.*

Riva'atul Adaniah Wahab

Comparative Analysis of Broadband Internet Development for Digital Economy in China and Indonesia

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ABSTRACT

It is important to promote broadband internet development because of its role in supporting economic activities. The 10% increase in broadband

penetration triggered economic growth of 1.38% in middle-income countries. In 2050, China is predicted to continue as the world economy leader, while Indonesia moves from position 8 to 4. This qualitative study uses "nation as an object of study" approach of cross-national comparison in comparing broadband internet development for digital economy in China and Indonesia in order to realize their future economy position. Four compared parameters are internet infrastructure profile, digital economy overview, broadband internet development strategy, and broadband internet regulation for digital economy. Its result is expected to give direct benefit to regulator in making further plans, strategies, and regulations of broadband internet, particularly for Indonesian government.

This study finds the telecommunication infrastructures to support broadband internet and digital economy regulations in China are more mature than Indonesia. Nonetheless, Indonesia is very active in the current e-commerce development. However, Indonesia needs to expand in other digital economy activities such as fintech and provide human resources with knowledge and skills as part of an important component of the digital economy. Indonesia also needs to learn from China regarding e-commerce regulations, such as taxation and product standards. This effort requires the collaboration of government, academics, and industry players to strengthen the role of broadband internet in digital economy, in China and in Indonesia.

Keywords: brodband internet, digital economy, e-commerce.

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