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| **Article Info** |  | **ABSTRACT** (10 PT) |
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1. **INTRODUCTION (10 PT)**

The main text format consists of a flat left-right columns on A4 paper (quarto). The margin text from the left and top are 2.5 cm, right and bottom are 2 cm. The manuscript is written in Microsoft Word, single space, Time New Roman 10 pt, and maximum 12 pages for original research article, or maximum 16 pages for review/survey paper, which can be downloaded at the website: http://ijeecs.iaescore.com.

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A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself. Immediately after the abstract, provide a maximum of 7 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

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4. Results and Discussion, and 5. Conclusion.** The structure is well-known as **IMRaD** style.

Literature review that has been done author used in the section "INTRODUCTION" to explain
the difference of the manuscript with other papers, that it is innovative, it are used in the section "METHOD" to describe the step of research and used in the section "RESULTS AND DISCUSSION" to support the analysis of the results [2]. If the manuscript was written really have high originality, which proposed a new method or algorithm, the additional section after the "INTRODUCTION" section and before the "METHOD" section can be added to explain briefly the theory and/or the proposed method/algorithm [4].

1. **METHOD (10 PT)**

Explaining research chronological, including research design, research procedure (in the form of algorithms, Pseudocode or other), how to test and data acquisition [5]–[7]. The description of the course of research should be supported references, so the explanation can be accepted scientifically [2], [4]. Figures 1-2 and Table 1 are presented center, as shown below and cited in the manuscript [5], [8]–[13]. The effects of electrical discharges to acidity of HVNE and NELV has been illustrated in Figure 2(a) and the effects of breakdown voltage of NE and NELV has beem illustrated in Figure 2(b).



Figure 1. Weibull distribution of all filler concentrations

|  |  |
| --- | --- |
|  |  |
| (a) | (b) |

Figure 2. Effects of electrical discharges to (a) acidity of HVNE and NELV and (b) breakdown voltage of NE and NELV samples

Table 1. The performance of ...

|  |  |  |
| --- | --- | --- |
| Variable | Speed (rpm) | Power (kW) |
| x | 10 | 8.6 |
| y | 15 | 12.4 |
| z | 20 | 15.3 |

1. **RESULTS AND DISCUSSION (10 PT)**

In this section, it is explained the results of research and at the same time is given
the comprehensive discussion. Results can be presented in figures, graphs, tables and others that make
the reader understand easily [14], [15]. The discussion can be made in several sub-sections.

**3.1. Sub section 1**

Equations should be placed at the center of the line and provided consecutively with equation numbers in parentheses flushed to the right margin, as in (1). The use of Microsoft Equation Editor or MathType is preferred.

$E\_{v}-E=\frac{h}{2.m} (k\_{x}^{2}+k\_{y}^{2}$) (1)

All symbols that have been used in the equations should be defined in the following text.

**3.2. Sub section 2**

Proper citation of other works should be made to avoid plagiarism. When referring to a reference item, please use the reference number as in [16] or [17] for multiple references. The use of ”Ref [18]...” should be employed for any reference citation at the beginning of sentence. For any reference with more than 3 or more authors, only the first author is to be written followed by *et al*. (e.g. in [19]). Examples of reference items of different categories shown in the References section. Each item in the references section should be typed using 8 pt font size [20]–[25].

3.2.1. Subsub section 1

yy

3.2.2. Subsub section 2

zz

1. **CONCLUSION (10 PT)**

Provide a statement that what is expected, as stated in the "INTRODUCTION" section can ultimately result in "RESULTS AND DISCUSSION" section, so there is compatibility. Moreover, it can also be added the prospect of the development of research results and application prospects of further studies into the next (based on result and discussion).

**ACKNOWLEDGEMENTS (10 PT)**

Author thanks ... . In most cases, sponsor and financial support acknowledgments.

**REFERENCES (10 PT)**

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* R. Fardel, M. Nagel, F. Nuesch, T. Lippert, and A. Wokaun, “Fabrication of organic light emitting diode pixels by laser-assisted forward transfer,” *Appl. Phys. Lett.*, vol. 91, no. 6, Aug. 2007, Art. no. 061103, doi: 10.1063/1.2759475.
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* J. Zhao, G. Sun, G. H. Loh, and Y. Xie, “Energy-efficient GPU design with reconfigurable in-package graphics memory,” in *Proc. ACM/IEEE Int. Symp. Low Power Electron. Design (ISLPED)*, Jul. 2012, pp. 403–408, doi: 10.1145/2333660.2333752.
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* A. Taflove, *Computational Electrodynamics: The Finite-Difference Time-Domain Method* in Computational Electrodynamics II, vol. 3, 2nd ed. Norwood, MA, USA: Artech House, 1996.
* R. L. Myer, “Parametric oscillators and nonlinear materials,” in *Nonlinear Optics*, vol. 4, P. G. Harper and B. S. Wherret, Eds., San Francisco, CA, USA: Academic, 1977, pp. 47–160.
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*See the examples:*

**REFERENCES**

[1] M. Sigala, A. Beer, L. Hodgson, and A. O’Connor, *Big Data for Measuring the Impact of Tourism Economic Development Programmes: A Process and Quality Criteria Framework for Using Big Data*. 2019.

[2] G. Nguyen *et al.*, “Machine Learning and Deep Learning frameworks and libraries for large-scale data mining: a survey,” *Artif. Intell. Rev.*, vol. 52, no. 1, pp. 77–124, 2019, doi: 10.1007/s10462-018-09679-z.

[3] C. Shorten and T. M. Khoshgoftaar, “A survey on Image Data Augmentation for Deep Learning,” *J. Big Data*, vol. 6, no. 1, 2019, doi: 10.1186/s40537-019-0197-0.

[4] R. Vinayakumar, M. Alazab, K. P. Soman, P. Poornachandran, A. Al-Nemrat, and S. Venkatraman, “Deep Learning Approach for Intelligent Intrusion Detection System,” *IEEE Access*, vol. 7, pp. 41525–41550, 2019, doi: 10.1109/ACCESS.2019.2895334.

[5] K. Sivaraman, R. M. V. Krishnan, B. Sundarraj, and S. Sri Gowthem, “Network failure detection and diagnosis by analyzing syslog and SNS data: Applying big data analysis to network operations,” *Int. J. Innov. Technol. Explor. Eng.*, vol. 8, no. 9 Special Issue 3, pp. 883–887, 2019, doi: 10.35940/ijitee.I3187.0789S319.

[6] A. D. Dwivedi, G. Srivastava, S. Dhar, and R. Singh, “A decentralized privacy-preserving healthcare blockchain for IoT,” *Sensors (Switzerland)*, vol. 19, no. 2, pp. 1–17, 2019, doi: 10.3390/s19020326.

[7] F. Al-Turjman, H. Zahmatkesh, and L. Mostarda, “Quantifying uncertainty in internet of medical things and big-data services using intelligence and deep learning,” *IEEE Access*, vol. 7, pp. 115749–115759, 2019, doi: 10.1109/ACCESS.2019.2931637.

[8] S. Kumar and M. Singh, “Big data analytics for healthcare industry: Impact, applications, and tools,” *Big Data Min. Anal.*, vol. 2, no. 1, pp. 48–57, 2019, doi: 10.26599/BDMA.2018.9020031.

[9] L. M. Ang, K. P. Seng, G. K. Ijemaru, and A. M. Zungeru, “Deployment of IoV for Smart Cities: Applications, Architecture, and Challenges,” *IEEE Access*, vol. 7, pp. 6473–6492, 2019, doi: 10.1109/ACCESS.2018.2887076.

[10] B. P. L. Lau *et al.*, “A survey of data fusion in smart city applications,” *Inf. Fusion*, vol. 52, no. January, pp. 357–374, 2019, doi: 10.1016/j.inffus.2019.05.004.

[11] Y. Wu *et al.*, “Large scale incremental learning,” *Proc. IEEE Comput. Soc. Conf. Comput. Vis. Pattern Recognit.*, vol. 2019-June, pp. 374–382, 2019, doi: 10.1109/CVPR.2019.00046.

[12] A. Mosavi, S. Shamshirband, E. Salwana, K. wing Chau, and J. H. M. Tah, “Prediction of multi-inputs bubble column reactor using a novel hybrid model of computational fluid dynamics and machine learning,” *Eng. Appl. Comput. Fluid Mech.*, vol. 13, no. 1, pp. 482–492, 2019, doi: 10.1080/19942060.2019.1613448.

[13] V. Palanisamy and R. Thirunavukarasu, “Implications of big data analytics in developing healthcare frameworks – A review,” *J. King Saud Univ. - Comput. Inf. Sci.*, vol. 31, no. 4, pp. 415–425, 2019, doi: 10.1016/j.jksuci.2017.12.007.

[14] J. Sadowski, “When data is capital: Datafication, accumulation, and extraction,” *Big Data Soc.*, vol. 6, no. 1, pp. 1–12, 2019, doi: 10.1177/2053951718820549.

[15] J. R. Saura, B. R. Herraez, and A. Reyes-Menendez, “Comparing a traditional approach for financial brand communication analysis with a big data analytics technique,” *IEEE Access*, vol. 7, pp. 37100–37108, 2019, doi: 10.1109/ACCESS.2019.2905301.

[16] D. Nallaperuma *et al.*, “Online Incremental Machine Learning Platform for Big Data-Driven Smart Traffic Management,” *IEEE Trans. Intell. Transp. Syst.*, vol. 20, no. 12, pp. 4679–4690, 2019, doi: 10.1109/TITS.2019.2924883.

[17] S. Schulz, M. Becker, M. R. Groseclose, S. Schadt, and C. Hopf, “Advanced MALDI mass spectrometry imaging in pharmaceutical research and drug development,” *Curr. Opin. Biotechnol.*, vol. 55, pp. 51–59, 2019, doi: 10.1016/j.copbio.2018.08.003.

[18] C. Shang and F. You, “Data Analytics and Machine Learning for Smart Process Manufacturing: Recent Advances and Perspectives in the Big Data Era,” *Engineering*, vol. 5, no. 6, pp. 1010–1016, 2019, doi: 10.1016/j.eng.2019.01.019.

[19] Y. Yu, M. Li, L. Liu, Y. Li, and J. Wang, “Clinical big data and deep learning: Applications, challenges, and future outlooks,” *Big Data Min. Anal.*, vol. 2, no. 4, pp. 288–305, 2019, doi: 10.26599/BDMA.2019.9020007.

[20] M. Huang, W. Liu, T. Wang, H. Song, X. Li, and A. Liu, “A queuing delay utilization scheme for on-path service aggregation in services-oriented computing networks,” *IEEE Access*, vol. 7, pp. 23816–23833, 2019, doi: 10.1109/ACCESS.2019.2899402.

[21] G. Xu, Y. Shi, X. Sun, and W. Shen, “Internet of things in marine environment monitoring: A review,” *Sensors (Switzerland)*, vol. 19, no. 7, pp. 1–21, 2019, doi: 10.3390/s19071711.

[22] M. Aqib, R. Mehmood, A. Alzahrani, I. Katib, A. Albeshri, and S. M. Altowaijri, *Smarter traffic prediction using big data, in-memory computing, deep learning and gpus*, vol. 19, no. 9. 2019.

[23] S. Leonelli and N. Tempini, *Data Journeys in the Sciences*. 2020.

[24] N. Stylos and J. Zwiegelaar, *Big Data as a Game Changer: How Does It Shape Business Intelligence Within a Tourism and Hospitality Industry Context?* 2019.

[25] Q. Song, H. Ge, J. Caverlee, and X. Hu, “Tensor completion algorithms in big data analytics,” *arXiv*, vol. 13, no. 1, 2017.

**BIOGRAPHIES OF AUTHORS (10 PT)**

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| https://publons.com/media/thumbs/academic/photos/0171c1d8d05d4562be40ef233993ad87.jpg.200x200_q95_crop_detail_upscale.jpg | **Muhammad Usman Akram**     is Associate Professor at college of Electrical & Mechanical Engineering, National University of Sciences & Technology, Pakistan. He Holds a PhD degree in Computer Engineering with specialization in medical image analysis. His research areas are image/signal processing, biometrics, medical image analysis and pattern recognition. He is director of Biomedical Image and Signal Analysis Research Lab. He is a recipient of different national and international awards such as NUST overall best researcher award, HEC Best University Teacher Award, C EME NUST best researcher award, HEC best research scholar award, Pakistan software house association awards (P@SHA), Asia Pacific ICT alliance awards (APICTA) etc. He is cofounder of RISETech which is a technology-based company and their innovative products received appreciation at national and international level. Dr Usman has filed a number of patents and industrial designs on his innovative ideas and has been awarded with two international patents. His research interests include image/signal processing, biometrics, medical image and analysis, and pattern recognition. He can be contacted at email: Usman.akram@ceme.nust.edu.pk. (9 pt) |
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| https://engineering.utm.my/computing/se/wp-content/uploads/sites/108/2013/01/ctz2.jpg | **Siti Zaiton Mohd Hashim**     received the B.Sc. degree in computer science from the University of Hartford, USA, the M.Sc. degree in computing from the University of Bradford, U.K., and the Ph.D. degree in soft computing from The University of Sheffield, U.K. She used to hold several administrative posts with the School of Computing, Universiti Teknologi Malaysia (UTM), Johor, from 2007 to 2018, including the Head of Department, the Deputy Dean of Postgraduate Studies, and the Deputy Dean of Academic. She was also the Director of the Big Data Centre (Centre of Excellence), UTM, from 2019 to February 2020. She is currently a Professor with the Department of Data Science and the Dean of Undergraduates, Universiti Malaysia Kelantan (UMK). She has supervised and co-supervised more than 20 masters and 20 Ph.D. students. She has authored or coauthored more than 150 publications: 80 proceedings and 57 journals, with 19 H-index and more than 1000 citations. Her research interests include soft computing, machine learning, and intelligent systems. She can be contacted at email: sitizaiton@umk.edu.my. (9 pt) |
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| https://www.upm.edu.my/imej/news/1543_bi.jpg | **Prof. Dr. Mohd Ali Hassan**     his higher studies in MS Food Engineering by coursework at the at the department of Food Science, University of Leeds from 1981-1982. He is attached to the Faculty of Biotechnology and Biomolecular Sciences. His research area then was on spray drying of food. With a small research grant provided by UPM, he developed the process for producing spry-dried coconut milk which made the national headlines. His vast experience and expertise in the field of biotechnology and biomolecular sciences have enabled him to become a national point of reference in the area of biomass, renewable energy and waste utilization. He has also served as a consultant to The Science Advisor Office, Prime Minister’s Department, on the national project on biomass utilisation and is the national representative for the Asia Biomass Association headquartered in Tokyo, Japan. He can be contacted at email: alihas@upm.edu.my. (9 pt) |