

# MOHD HAFIZUL AFIFI BIN ABDULLAH

Candidate for Doctor of Philosophy in Information Technology  
(Machine Learning and Data Science)



**Website:** <https://hafizulabdullah.com>

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## PROFESSIONAL SUMMARY

- Final year Ph.D. candidate in Information Technology at Universiti Teknologi PETRONAS (*waiting for viva voce, expected in early Jan 2025*).
- Extensive expertise in machine learning and data visualization for real-life data science problems.
- Holds 2 years in industry, 8 years in research, and 5 years of teaching experience.
- Recipient of the Best Tutor Award in the Postgraduate Appreciation Ceremony organized by CGS-UTP and PGSC-UTP (Universiti Teknologi PETRONAS, 2021).
- Certified Graduate Technologist by Malaysia Board of Technologists (No. GT21081682).

## ACADEMIC EXPERIENCE

*Research Assistant/Teaching Assistant*  
Computer and Information Sciences  
Department, Universiti Teknologi  
PETRONAS (UTP), Perak, Malaysia.

[Jan 2021 – Present]

- **Research Experience:**

- Conducted PhD research on information extraction from biomedical text data, event extraction, and natural language processing.
- Performed data quality assessment, collection, transformation, and implementation of machine learning and deep learning techniques.
- Assisted supervisor in reviewing grant proposal.
- Co-authored a book on Big Data Analytics and draft a book on Business Intelligence with supervisor.

- **Teaching Assistance Experience:**

- Teaching UG courses such as Business Intelligence, Big Data Analytics, IT/IS Project Management, Enterprise Resource Planning, IT Infrastructure, Information Security Management.
- Conducted and prepared materials for lab, tutorial, and workshop sessions.
- Evaluated and provided constructive feedback on tutorial and lab assignments by UG students.
- Assisted in invigilating tests and final exams.

*Postgraduate Research Attachment*  
Universitas Muhammadiyah Prof. Dr.  
HAMKA (UHAMKA), Jakarta,  
Indonesia.

[Apr 2021 – May 2021]

- Collaborated with research attachment supervisor.
- Prepared a KPI dashboard for UHAMKA.
- Prepared a collaborative research paper between UHAMKA and UTP.

*Trainer/ Assistant Trainer*  
Computer and Information Sciences  
Department, Universiti Teknologi  
PETRONAS (UTP), Perak, Malaysia.

[2020 – 2022]

- Business Analytics using Power BI for Management and Humanities Department, UTP (July 2022).
- KPT-PENJANA 3.0: Master the Basics of Big Data, AI, and ML for Tomorrow's Workforce (May 2022).
- KPT-PENJANA 1.0: Digital Transformation for the Future of Works: Big Data, AI and ML (Jan–Feb 2022).
  - Module 1: Understanding the "Future of Works".
  - Module 2: Introduction to Digital Transformation.
  - Module 3: Big Data Analytics: Insight to Action.
- BDA Using Power BI for Lembaga TH (Mar 2021).
- SKO: Power BI for Finance (Mar 2021).
- BDA for Oil & Gas Using Power BI (Feb 2021).
- Big Data Analytics for Business and Beyond (Oct 2020).
- BDA for PMA Beginner Level (Oct 2020).
- BDA Course with PETRONAS Staff (Mar 2020).

*Graduate Research Assistant*  
Faculty of Computer Science and  
Information Technology, Universiti  
Tun Hussein Onn Malaysia (UTHM),  
Johor, Malaysia.

[Mar 2017 – Jan 2019]

- Conducted data collection, pre-processing, and implementation of machine learning techniques.
- Assisted as a research assistant to complete a project funded by the Ministry of Higher Education Malaysia.
- Published research results in conferences and journals.
- Assisted in supervising UG Final Year Projects 1 & 2.

## **NON-ACADEMIC EXPERIENCE**

*Special Services*  
Universiti Teknologi PETRONAS (UTP),  
Perak, Malaysia.

[Dec 2020 – Jan 2021]

- Assisted PI in conducting workshop sessions.
- Prepare research papers and reports.

*Research Officer*  
Centre for Research in Data Science  
(CeRDaS), Universiti Teknologi  
PETRONAS, Perak, Malaysia.

[May 2020 – Dec 2020]

- Conducted data understanding, pre-processing, data modeling, and analysis of ML and DL.
- Assisted PI in conducting workshop sessions.
- Contributed to writing book chapters.
- Prepare research papers and reports.

<i>Special Services</i> Universiti Teknologi PETRONAS (UTP), Perak, Malaysia.	[Mar 2020 – May 2020]	<ul style="list-style-type: none"> <li>Assisted PI in conducting workshop sessions.</li> <li>Prepare research papers and reports.</li> </ul>
<i>System Analyst Programmer</i> Gates IT Solution Sdn Bhd, Selangor, Malaysia.	[Aug 2016 – Feb 2017]	<ul style="list-style-type: none"> <li>Successfully integrated new features and revamped the system's UI/UX following the client's requirements.</li> <li>Collaborated with different teams to complete four IT projects.</li> <li>Participated in daily scrum meetings to report progress and plan the next milestones.</li> </ul>

## QUALIFICATION

<i>Ph.D. in Information Technology</i> (By Research) Computer and Information Sciences Department, Universiti Teknologi PETRONAS (UTP), Perak, Malaysia.	[2021 – Present]	<i>Status: Submitted thesis and waiting for VIVA</i> Supervisor: Assoc. Prof. Ts. Dr. Norshakirah Ab. Aziz Co-Supervisor: Assoc. Prof. Ts. Dr Said Jadid Abdulkadir
<i>Master of Information Technology</i> (By Research) Faculty of Computer Science and Information Technology, Universiti Tun Hussein Onn Malaysia (UTHM), Johor, Malaysia.	[2017 – 2021]	Thesis Title: Improved Personalised Data Modelling using Parameter Independent Fuzzy Weighted k-Nearest Neighbour for Spatio/Spectro-Temporal Data Keywords: machine learning, neural networks Supervisor: Dr. Muhaini Binti Othman Co-Supervisor: Assoc. Prof. Dr. Shahreen Binti Kasim
<i>Bachelor's in Computer Science (Web Technology) with Honours</i> Faculty of Computer Science and Information Technology, Universiti Tun Hussein Onn Malaysia (UTHM), Johor, Malaysia.	[2013 – 2017]	Thesis Title: Research on Improving Dominant Yeast Genes for Gene Function Prediction Keywords: gene expression, clustering Supervisor: Assoc. Prof. Dr. Shahreen Binti Kasim First Class Honours with CGPA 3.74
<i>Foundation in Science</i> Faculty of Applied Sciences, Universiti Teknologi MARA (UiTM), Puncak Alam Campus, Selangor, Malaysia.	[2012 – 2013]	<ul style="list-style-type: none"> <li>Foundation in Science (Physics, Chemistry, Biology, Additional Mathematics)</li> <li>CGPA 2.92</li> </ul>
<i>SMK Bandar Tun Hussein Onn 2</i> Hulu Langat, Selangor, Malaysia.	[2007 – 2011]	<ul style="list-style-type: none"> <li>Science Stream (Physics, Chemistry, Biology, Additional Mathematics)</li> <li>Malaysia Education Certificate (SPM): 9A</li> </ul>

## PROFESSIONAL BODY CERTIFICATIONS

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- Certified Graduate Technologist by the Malaysia Board of Technologists (MBOT).
- EC-Council Network Security Administrator (ENSA) by EC-Council.

## COURSES & WORKSHOPS

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- Training on Active Learning at CETaL, Universiti Teknologi PETRONAS (16–17 May 2024).
- Producing a High-Quality and Well-Researched Thesis at Universiti Teknologi PETRONAS (Dec 2023).
- Professional Short Course: LaTeX Workshop at Universiti Teknologi PETRONAS (25 Jul 2023).
- Outcome-Based Education & Teaching Approach at Universiti Teknologi PETRONAS (25 May 2022).
- Python for Data Analytics Workshop at Universiti Teknologi PETRONAS (9 Oct 2021).
- Moving Research Forward with ScienceDirect (21 Apr 2021).
- Microsoft Azure Data Science Workshop at Universiti Tun Hussein Onn Malaysia.
- Deploying Hyper-Heuristic & Meta-Heuristic Workshop at Universiti Malaysia Pahang (Dec 2018).
- Laravel Framework 1-Day Course at Universiti Tun Hussein Onn Malaysia (30 Sep 2017).
- Graduate Employability Management Scheme for SSO 2015 (System Development Programme), Malaysia Digital Economy Corporation (Oct–Dec 2015).

## CONFERENCES & SYMPOSIUMS

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- Presenter at the IAFOR International Conference on Education in Hawaii (IICE2023), 5–8 Jan 2023 (Virtual Conference).
- Presenter at the 2nd International Conference on Emerging Technologies and Intelligent Systems (ICETIS 2022), 2–3 Sep 2022 (Virtual Conference).
- Presenter at the International Conference on Computational Intelligence 2020 (ICCI 2020), 8–9 Oct 2020 (Virtual Conference).
- Presenter at the 4th International Conference on Soft Computing and Data Mining 2020 (SCDM 2020), 22–23 Jan 2020, Melaka, Malaysia.
- Guest Speaker at Ted Talk for Web Technology Department 2017, 23 Apr 2017, UTHM, Malaysia.
- Presenter and Session Chair at the 3rd International Conference on Soft Computing and Data Mining 2018 (SCDM 2018), 6–7 Feb 2018, Johor Baharu, Malaysia.

## SKILLS AND ABILITIES

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Data Science Tools	: Microsoft Power BI, Python, VS Code, Azure ML, KNIME Analytics.
Research Writing	: Mendeley, EndNote, LaTeX, JabRef.
Others	: Problem-solving, scrum, organizing & analytical thinking skills.

## AWARDS & CERTIFICATES

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### Notable Awards

- King's Scout Award, Scouts Association of Malaysia, 2011.
- Best Tutor Award for Department of Computer & Information Sciences at the 2021 Postgraduate Appreciation Ceremony, Universiti Teknologi PETRONAS, 2021.
- Vice Chancellor's Award, Universiti Tun Hussein Onn Malaysia, 2017.
- The best undergraduate Final Year Project (FYP), Universiti Tun Hussein Onn Malaysia, 2017.

### **Other Awards**

- Gold award for the invention of Performa.my at the Virtual International Research and Innovation Symposium and Exposition 2020 (RISE2020), Universiti Tun Hussein Onn Malaysia (UTHM).
- Platinum award in the International Invention, Innovation & Design Exposition for Built Environment and Engineering 2020 (IIBBEE2020), Universiti Teknologi MARA (UiTM).
- Gold award for the invention of Performa.my exhibited at the Virtual Research and Innovation Exhibition UniMAP (eREKA) 2020, Universiti Malaysia Perlis (UniMAP).
- Silver Award in UTHM Research and Innovation Fest 2017 (Student Category).
- Contestant (Bachelor Degree Category) at UTHM Three Minute Thesis (3MT) and Three Minute Report (3MR) Competition 2016, 16 Mar 2016, UTHM, Malaysia.

### **Research Funding Awards**

- Project Type: Fundamental Research Grant Scheme (FRGS 1612)  
Project Title: Improved Spatio-Temporal Data Modelling with Spiking Neural Network Methods for Environmental Event Prediction.  
Project Duration: Aug 2016 – Jan 2019  
Role: Member
- Project Type: Yayasan Universiti Teknologi Petronas (015LC0-277)  
Project Title: Forecasting of Crude Oil Price Using Deep Learning-ANN.  
Project Duration: Feb 2020 – Feb 2023  
Role: Member

### **NON-ACADEMIC INVOLVEMENTS**

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- Head of the Publication Bureau 2014/2015 of Perwira Residential College Council, UTHM.
- Chief Editor for SUAMATRA school magazine for the year 2011.
- Represented Malaysian Contingent for the 6<sup>th</sup> Malaysian-Thailand Border International Scouts Jamboree at the Pak Bang Scout Camp, Satun, Thailand, 2011.

### **COMPLETED PROJECTS**

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- Upgrade UI/UX for the MBA Universiti Tun Hussein Onn Malaysia official website.
- Performa.my: Developed a web application for performance satisfaction analysis.
- Developed a web application prototype for Platform Usahawan Johor Interaktif (PUJI).
- Developed the official website for 3A Bundle, Ghali Charity Foundation, Johor i Care Society, and ProofreadMyThesis.
- SSM EzBiz upgrade: Upgraded the system for the Companies Commission of Malaysia (SSM).
- Upgrade the e-Campus system for KUIPSAS.

### **MEMBERSHIP & VOLUNTARY WORKS**

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- IEEE Member: <https://iee-collabratec.ieee.org/app/p/hafizulamz>
- An active member of Ubuntu Malaysia Local Community (LoCo) Team.
- Volunteer at Pertubuhan Kebajikan 'Johor i Care' Negeri Johor (Cancer Support Group).
- Volunteer at One Heart Team (a local charity organization in Parit Raja).

## EDITORIAL ACTIVITIES

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Review International Journals	<ul style="list-style-type: none"><li>• Neural Networks.</li><li>• Computers, Materials &amp; Continua (CMC).</li><li>• Computer Systems Science and Engineering (CSSE).</li><li>• Journal of King Saud University-Computer and Information Sciences (JKSU-CIS).</li><li>• Journal of Applied Science, Technology and Computing (JASTEC).</li><li>• Journal of Soft Computing and Data Mining (JSCDM).</li></ul>
Review International Conferences	<ul style="list-style-type: none"><li>• 6<sup>th</sup> International Conference on Soft Computing and Data Mining (SCDM 2024), Putrajaya, Malaysia.</li><li>• The First International Conference on Artificial Intelligent and Autonomous System (i-CAIAS 2023), Virtual Conference.</li><li>• 9<sup>th</sup> Int. Conference on Computing and Informatics (ICOCI 2023).</li><li>• The 5<sup>th</sup> International Conference on Artificial Intelligence in Engineering and Technology (IICAET2023), Kota Kinabalu, Malaysia.</li><li>• 8<sup>th</sup> International Conference on Software Engineering &amp; Computer Systems 2023 (IEEE ICSECS 2023).</li><li>• 5<sup>th</sup> International Conference on Soft Computing and Data Mining (SCDM 2022), Online Conference.</li><li>• 5<sup>th</sup> International Conference on ICT in Education 2021 (ICTE 2021).</li></ul>

## PUBLICATIONS

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### Summary of Publications

Total Q1/Q2 Manuscripts: 4

 Google Scholar	<u>G/Scholar</u>	:	Citations: 176	Documents: 23	<i>h</i> -index: 8
 Scopus	<u>Scopus</u>	:	Citations: 104	Documents: 15	<i>h</i> -index: 7
 Clarivate Web of Science	<u>Web of Science</u>	:	Citations: 38	Documents: 9	<i>h</i> -index: 4

### Journal Publications

- **Abdullah, M.H.A.**, Aziz, N., Abdulkadir, S.J., Hussain, K., Alhussian, H. & Talpur, N. A comprehensive review of existing corpora and methods for creating annotated corpora for event extraction tasks. *Journal of Data and Information Science*, 2024, Sciendo, <https://doi.org/10.2478/jdis-2024-0029> **(Indexed by ISI/WoS and SCOPUS, Q2 with impact factor 1.5)**
- Talpur, N., Abdulkadir, S. J., Akhir, E. A. P., Hasan, M. H., Alhussian, H., & **Abdullah, M. H. A.** (2023). A novel bitwise arithmetic optimization algorithm for the rule base optimization of deep neuro-fuzzy system. *Journal of King Saud University-Computer and Information Sciences*, 35(2), 821-842. **(Indexed by ISI/WoS and SCOPUS, Q1 with impact factor 5.102)**
- **Abdullah, M. H. A.**, Aziz, N., Abdulkadir, S. J., Alhussian, H. S. A., & Talpur, N. (2023). Systematic Literature Review of Information Extraction from Textual Data: Recent Methods, Applications, Trends, and Challenges. *IEEE Access*. **(Indexed by ISI/WoS and SCOPUS, Q2 with impact factor 3.476)**
- Talpur, N., Abdulkadir, S. J., Alhussian, H., Hasan, M. H., & **Abdullah, M. H. A.** (2022). Optimizing deep neuro-fuzzy classifier with a novel evolutionary arithmetic optimization algorithm. *Journal of Computational Science*, 64, 101867. **(Indexed by ISI/WoS and SCOPUS, Q1 with impact factor 3.817)**

- **Abdullah, M. H. A.**, Othman, M., Kasim, S., & Mohamed, S. A. (2019). Evolving spiking neural networks methods for classification problem: a case study in flood events risk assessment. *Indonesian Journal of Electrical Engineering and Computer Science*, 16(1), 222-229.
- Mohamed, S. A., Othman, M., & **Abdullah, M. H. A.** (2019). A review on data clustering using spiking neural network (SNN) models. *Indonesian Journal of Electrical Engineering and Computer Science*, 15(3), 1392-1400.
- Othman, M., Arif, M., **Abdullah, M. H. A.**, Yusof, M. M., & Mohamed, R. (2017). Human resource management on cloud. *JOIV: International Journal on Informatics Visualization*, 1(4-2), 260-263.
- Othman, M., Shamsudin, S. N., **Abdullah, M. H. A.**, Yusof, M. M., & Mohamed, R. (2017). iBid: A Competitive Bidding Environment for Multiscale Tailor. *JOIV: International Journal on Informatics Visualization*, 1(4-2), 256-259.
- Othman, M., Nordin, M. S., **Abdullah, M. H. A.**, Yusof, M. M., & Mohamed, R. (2017). Cakelicious: Web App for Designing a Customised Wedding Cakes. *JOIV: International Journal on Informatics Visualization*, 1(4-2), 236-239.

### Conference Proceedings

- Aziz, N., Akhir, E. A. P., Abdulkadir, S. J., Alhussian, H. S. A., & **Abdullah, M. H. A.** (2023). Development of Analytical Thinking Using Flipped Classroom Approach for Big Data Analytics Courses. In *The IAFOR International Conference on Education-Hawaii 2023 Official Conference Proceedings 2023* (pp. 679-696). The International Academic Forum (IAFOR).
- **Abdullah, M. H. A.**, Aziz, N., Abdulkadir, S. J., Akhir, E. A. P., & Talpur, N. (2023). Event Detection and Information Extraction Strategies from Text: A Preliminary Study Using GENIA Corpus. In *International Conference on Emerging Technologies and Intelligent Systems* (pp. 118-127). Springer, Cham.
- Aziz, N., **Abdullah, M. H. A.**, Osman, N. A., Musa, M. N., & Akhir, E. A. P. (2023). Predictive Analytics for Oil and Gas Asset Maintenance Using XGBoost Algorithm. In *International Conference on Emerging Technologies and Intelligent Systems* (pp. 108-117). Springer, Cham.
- N. Aziz, **M. H. A. Abdullah** and A. N. Zaidi, "Predictive Analytics for Crude Oil Price Using RNN-LSTM Neural Network," *2020 International Conference on Computational Intelligence (ICCI)*, Bandar Seri Iskandar, Malaysia, 2020, pp. 173-178.
- **Abdullah, M. H. A.**, Othman, M., Kasim, S., Saharuddin, S. S., & Mohamed, S. A. (2020, January). A Spiking Neural Networks Model with Fuzzy – Weighted k – Nearest Neighbour Classifier for Real-World Flood Risk Assessment. In *International Conference on Soft Computing and Data Mining* (pp. 222-230). Springer, Cham.
- Othman, M., Mohamed, S. A., **Abdullah, M. H. A.**, Yusof, M. M., & Mohamed, R. (2018). A Framework to Cluster Temporal Data Using Personalised Modelling Approach. *Advances in Intelligent Systems and Computing*, 181-190.
- Othman, M., Halil, N. M., Yusof, M. M., Mohamed, R., & **Abdullah, M. H. A.** (2018). Empowering self-management through m-health applications. In *MATEC Web of Conferences* (Vol. 150, p. 05018). EDP Sciences.
- Othman, M., Mohamed, S. A., **Abdullah, M. H. A.**, Yusof, M. M., & Mohamed, R. (2018). A Framework to Cluster Temporal Data Using Personalised Modelling Approach. *Advances in Intelligent Systems and Computing*, 181-190.
- Kasim, S., Fudzee, M. F., Salamat, M. A., Ramli, A. A., Mahdin, H., & **Abdullah, M. H. A.** (2016). An improved computational framework using one stage filtration by incorporating knowledge in gene expression clustering. *Proceedings of the International Conference on Artificial Intelligence and*

*Robotics and the International Conference on Automation, Control and Robotics Engineering (ICAIR-CACRE '16).*

#### **Book/Book Chapters**

- Aziz, N. A., Akhir, E. A. P., Kadir, S. J. A., Alhussian, H., Osman, N. A., & **Abdullah, M. H. A.** (2023). *Data Analytics Using Python*. UTP Press. [ISBN: 978-967-2880-58-5]
- **Abdullah, M. H. A.**, Othman, M., & Kasim, S. Comparative Analysis of Spatio/Spectro-Temporal Data Modelling Techniques. *Data Engineering and Information Security*.
- Yusof, M.M., Rosli, N.F., Othman, M., Mohamed, R., **Abdullah, M.H.A.** (2018). M-DCocoa: M-Agriculture Expert System for Diagnosing Cocoa Plant Diseases. In: Ghazali, R., Deris, M., Nawi, N., Abawajy, J. (eds) *Recent Advances on Soft Computing and Data Mining. SCDM 2018. Advances in Intelligent Systems and Computing*, vol 700. Springer, Cham.

#### **REFERENCES**

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References are available upon request.