## **Curriculum Vitae**

### Personal information

Name

Associate Professor Ts. Dr. Rizauddin Saian

Address

College of Computing, Informatics and Mathematics Universiti Teknologi MARA (UiTM) Perlis Branch,

02600 Arau, Perlis,

Malaysia.

Telephone

+6049882770 (office) WA-http://wa.rizauddin.com

Email

rizauddin@uitm.edu.my

Nationality

Malaysian

Gender

Male

Website

https://www.rizauddin.com/

Google Scholar

https://scholar.google.com/citations?user=ithh22sAAAAJ&hl=en

Scopus

https://www.scopus.com/authid/detail.url?authorId=

36160769800

GitHub (Software)

https://github.com/rizauddin

Google Play (Android Apps)

https://play.google.com/store/apps/developer?id=Rizauddin+

Saian

YouTube Channel

Education

2013

https://www.youtube.com/channel/UCnpqtFxC-e48UVUC9AJWxsw

Doctor of Philosophy, Universiti Utara Malaysia, Sintok, Kedah, Malaysia Title: A Hybrid of Ant Colony Optimization Algorithm and Simulated

Annealing for Classification Rules.

Supervisor: Prof. Dr. Ku Ruhana Bt Ku Mahamud

2005 Master of Science (Information Technology), Universiti Utara Malaysia,

Sintok, Kedah, Malaysia

Title: Stemming Algorithm in Searching Malay Text. Supervisor: Prof. Dr. Ku Ruhana Bt Ku Mahamud

1998 Bachelor of Science (Hons) (Mathematics), Universiti Malaya, Kuala

Lumpur, Malaysia

Supervisor: Prof. Dato' Dr. Mohamed Ridza Wahiddin

**Professional Qualification** 

2023

Professional Technologist, Malaysia Board of Technologists

**Experiences** 

Working

2022-current 2009-2022 Associate Professor, UiTM Cawangan Perlis Senior Lecturer, UiTM Cawangan Perlis

1999-2009

Lecturer, UiTM Cawangan Perlis

**Administrative** 

Sep. 2021-Aug. 2023

Head of Quality Unit, UiTM Cawangan Perlis

Mar. 2017-Feb. 2020 Head of Study Centre, Faculty of Computer & Mathematical Sciences, UiTM Cawangan Perlis Feb. 2013-Dec. 2014 Postgraduate Coordinator, UiTM Cawangan Perlis **Visiting Fellowship Programme** 7 Apr. 2019-11 Apr. 2019 Fakultas Teknik, Universitas Islam Riau, Indonesia. **Courses Taught** Undergraduate MAT668 – Graph Theory MAT491 - Calculus III MAT421 - Calculus I MAT422 - Mathematical Logic & Proving Techniques MAT495/MAT295 - Partial Derivatives & Approximation Methods MAT530 - Introduction to Mathematical Modelling

MAT535 – Nonlinear Programming

Diploma MAT183 – Calculus I

MAT261 – Intermediate Algebra MAT153 – Business Calculus MAT141 – Engineering Maths

MAT105 – Fundamentals of Mathematics

## **Research Interests**

Data Mining
Machine Learning
Ant Colony Optimization

## **Research Grants**

Jan. 2019-Dec. 2021

Jan. 2019-Sep. 2021

Dec. 2015-Nov. 2016

Aug. 2012-Jul. 2016

Oct. 2023–Sept. 2025

Hybrid Integration of Tree Based Classifier and Machine Learning Algorithm Approaches for Groundwater Potential (GWP) Modeling. FRGS/1/2023/WAB07/UITM/02/03. Member.

Sep. 2021–Aug. 2023

An Improved Ant Colony Optimization Feature Selection Algorithm for Modelling Bankruptcy of Malaysia Shariah-compliant Securities. FRGS/1/2021/STG06/UITM/02/8. Member.

Jan. 2021–Jun. 2022 Vehicle Routing Problem with Time Windows (VRPTW) Based Optimization Models for Sustainable e-Grocery Delivery using Homogeneous and Heterogeneous Fleet of Vehicles. 600-RMC/MITRANS\_IRES 5/3(007/2020). Member.

Hierarchical Clustering based on Ant Colony Optimization Algorithm for Halal Compliance. TRGS/1/2018/UUM/02/3/3. Member.

A New Ant Based Decision Tree Algorithm for Imbalanced Medical Data. FRGS/1/2018/STG06/UITM/02/3. **Head**.

Smartphone Assisted Legal Writing. 600-RMI/DANA 5/3/ARAS (45/2015). Member.

Decision Models for Flood Disaster Early Warning and Risk Reduction. Long Term Research Grant Scheme (LRGS). UUM S/O Code: 12490. Member.

Nov. 2013-Nov. 2015 A Primary User Locality Strategy for Distributed Channel Strategy in Cognitive Radio Ad Hoc Networks. Fundamental Research Grant Scheme (FRGS). FRGS (600-RMI/FRGS 5/3 (157/2013)). Member. (2013-2014). Jul. 2013-Jun. 2014 Ant Based Rule Induction Algorithm. Pendidikan UiTM Dana Kecemerlangan (Perlis). 600-UiTMPs/PJIM&A/ST/DKCP (02/2012). Head. Apr. 2012-Apr. 2014 Boundary Value Problems in Deformation of Beam. Fundamental Research Grant Scheme (FRGS). 600-RMI/FRGS 5/3 (9/2012). Member. A New Ant Based Rule Extraction Algorithm for Web Classification. Apr. 2010-Mar. 2011 Fundamental Research Grant Scheme (FRGS). UUM S/O Code: 11873. Member. Honors, Awards, and Accomplishments 2023 Anugerah Perkhidmatan Setia 20 Tahun UiTM. 2020 Anugerah Perkhidmatan Cemerlang (Excellent Service Awards) UiTM 2020. Anugerah Penerbitan Jurnal Berindeks. Majlis Anugerah Semarak Sanjung, UiTM Cawangan Perlis 2020. 2019 Anugerah Semarak Penyelidikan (Vibrant Research Award) UiTM Cawangan Perlis 2019. 2013 Anugerah Perkhidmatan Cemerlang (Excellent Service Awards) UiTM 2013. **Editorial Duties Editorial Board** Jan. 2023-Dec. 2025 Journal of Information and Communication Technology (JICT). ISSN Jan. 2020-Dec. 2022 1675-414X. Scopus Q1. http://jict.uum.edu.my/ Jan. 2017-Dec. 2019 **Technical Program Committee** The 6th International Conference on Soft Computing in Data Science 2021 (SCDS 2021). https://aaec.uitm.edu.my/scds2021/ 2015 The 1st International Conference on Soft Computing in Data Science (SCDS 2015). https://fskm.uitm.edu.my/scds2015/ Reviewer 2021 The 6th International Conference on Soft Computing in Data Science (SCDS 2021). https://aaec.uitm.edu.my/scds2021/ Jan. 2018-Dec. 2020 Malaysian Journal of Computing (MJoC). https://mjoc.uitm.edu.my 2019 The 5th International Conference on Soft Computing in Data Science (SCDS 2019). https://aaec.uitm.edu.my/scds2019/

2018	The 4th International Conference on Soft Computing in Data Science (SCDS 2018). https://aaec.uitm.edu.my/scds2018/
2017	The 6th International Conference on Computing and Informatics 2017 (ICOCI2017). http://www.icoci.cms.net.my/icoci2017/
	The 3rd International Conference on Soft Computing in Data Science (SCDS 2017). https://aaec.uitm.edu.my/scds2017/
2016	The 2nd International Conference on Soft Computing in Data Science (SCDS 2016). https://fskm.uitm.edu.my/scds2016/
2015	The 1st International Conference on Soft Computing in Data Science (SCDS 2015). https://fskm.uitm.edu.my/scds2015/
Supervisions	
	PhD Supervision
2019–	Muhammad Hasbullah Mohd Razali. PhD (Statistics) CS953. A New Ant Based Decision Tree Algorithm for Imbalance Data. <b>Main Supervisor</b> . (In progress).
2021–	Ros Fadilah binti Deraman. PhD (Mathematics) CS952. Higher Order Finite Difference Method For Solving Goursat Problem. Co-Supervisor. (In progress).
2023–	Nurhuda binti Ismail. PhD (Mathematics) CDCS952. Variational Active Contour Models for Noisy Image. Co-Supervisor. (In progress).
2023–	Masters Supervision  Nur Laila binti Mohamad Noorisham. MSc (Mathematics) CDCS752.  Graph Analytics of Relation Between Mathematical Domain and Concepts in the al-Quran. Co-Supervisor. (In progress)
2021–	Annuur Zakiah binti Zainol. MSc (Mathematics) CS752. An Improved Ant Colony Optimization Algorithm for Predicting Bankcruptcy in Malaysia. <b>Main Supervisor</b> . (In progress)
2021–	Nurhazimah binti Basir. MSc (Transport and Logistics) (LT780). Multi-Objective Mixed Integer Programming Model of Vehicle Routing Problem for Sustainable Urban e-Grocery Delivery. Co-Supervisor. (In progress).
2016–2018	Siti Nor Fathihah Azahari. Master of Science (Mathematics) CS752. Fuzzy Time Series Sliding Window Model for Rainfall Forecasting. <b>Main Supervisor</b> . Completed 6 February 2018.
2019	Undergraduate International Research Interns Angga Ibnu Kholid. Universitas Islam Riau. 16/7/2019–7/8/2019
2018	Josua Iwanda & Sigit Prihantoro. Universiti Islam Riau. Lecturer Room Inventory System. 1/8/2018–27/8/2018.
	Bima Augustian Wana Putra & Royan Permana Rivaldi. Universiti Islam Riau. Library Room Reservation System. 8/1/2018–30/1/2018.

Daniel Chan. Diploma Sains Komputer (CS110). Science Laboratory Inventory System. 2/5/2017-25/6/2017. **Undergraduate International Project Supervision** 2020 Shella Eldwina Fitri. Universiti Islam Riau. Macro and Micro Graph Search: Optimizing A\* Search Algorithm in Big Data. Completed January 2021. **Undergraduate Project Supervision** 2024 Wan Nurhazeegah Binti Wan Salim. Prediction of Credit Card Fraud using Ant Colony Optimization. (In progress) Nur Azlyna Anuar. Prediction of Employee Attrition using using Ant Colony Optimization. (In progress) 2023 Noor Aina Syahirah binti Ramzi. Consumer Behaviour Classification using Ant Colony Optimization. (In progress) Nur Insyirah binti Ahmad Zammami. E-commerce text classification using Ant Colony Optimization. Completed February 2024. 2022 Nur Aisyatul Husna Ahmad Yusri. Early Diabetes Risk Prediction using Ant Colony Optimization. Completed March 2023. Azfaruddin Azri. Prediction of Stroke using Ant Colony Optimization. Completed March 2023. 2021 Nurul Hanis Syafigah binti Mohd Ripin. Predicting Mortality Caused by Heart Failure using Ant Colony Optimization. Completed January 2022. Nurul Fathihah binti Mustapha. Prediction of Lung Cancer using Ant Colony Optimization. Completed August 2021. 2020 Nur Ibtisyam binti Zafri. Predicting Autistic Spectrum Disorder for Toddler using Ant Colony Optimization. Completed January 2021. Siti Sarah Aqilah binti Che Ani. Predicting Breast Cancer using Ant Colony Optimization. Completed January 2021. 2019 Siti Aisyah binti Ismail. Predicting Heart Disease using Ant Colony Optimization. Completed June 2020. Nur Syafiqah binti Abdul Ghani. Predicting Bankruptcy using Ant Colony Optimization. Completed June 2020. Noor Shafiga Fazlien. Predicting Attackers of Online Shaming using Ant Colony Optimization. Completed June 2019. 2018 Aliff Adham bin Adnan. Prediction of Health Supplement Consumption using Ant Colony Optimization. Completed Dec 2018.

Abdul Abbas Abdul Karim He. Predicting Area of Law Using Ant Colony

Optimization. Completed May 2018.

2017

2017 Umi Nasyrah binti Norizan. Predicting Timah Tasoh Reservoir Water Level Stages Using Ant Colony Optimization. Completed June 2017.

Nor Amira Natasha Abd Rahman. Predicting Perlis Water Quality Using Ant Colony Optimization. Completed June 2017.

Nurnabilah Mohd Nasir. Predicting Water Quality Index of Pulau Pinang River Using Ant Colony Optimization. Completed Dec. 2017.

2016 Syaidatul Nadia Sabri. Ant Colony Optimization for Forecasting Flood Based on Rainfall Distribution in Perlis. Completed June 2016.

Nurfaezah Mohamad Zahir. Ant Colony Optimization for Predicting Sg. Arau Water Level. Completed Dec. 2016.

Muhammad Arimi Syakir Ismail. Ant Colony Optimization for Predicting Water Crisis in Perlis. Completed June 2016.

Nur Wahida Baharuddin. Ant Colony Optimization for Forecasting Flood Based on River Water Level in Perlis. Completed June 2016.

Nurul Atiqah Dzulkifly. Ant Colony Optimization Algorithm for Predicting Dengue Fever Types. Completed June 2015.

Zarin Sofia Zahari. Ant Colony Optimization Algorithm for Predicting Inflation Types in Malaysia. Completed June 2015.

Nor Astiqah Omar. Ant Colony Optimization for Prediction Software Piracy Tendency. Completed Dec. 2015.

Nur'Aisyah Abdul Wahab. Factor Influencing Grape Production in Perlis: A Multiple Linear Regression Analysis. Completed Jun. 2014.

Nor Dalila Razali. Financial Credit Scoring Prediction Using Ant Colony Optimization. Completed Dec. 2012.

### **Innovations**

Abu Bakar, S., Saian, R., Mohd Sidek, N. Z., Mohd Nanif, H., Nordin, N., Batcha, S. R., Sadikin, Z, & Al-Wadood, Z. (2023). Graph Theory Basics For Beginners. MOOC. The Virtual International e-Content Development Competition (eCondev) 2023. Bronze Award. 22 August – 24 August 2023.

Teoh, Y. K., Abu Hasan, S., Saian, R., Khairudin, N. I., & Ahmad Bakhtiar, N. S. (2022). System of Inequalities. Micro-Credential. The Virtual International e-Content Development Competition (eCondev) 2022. Bronze Award. 22 August – 30 August 2022.

Zainol, A. Z., Saian, R., Teoh, Y. K., & Abu Bakar, S. (2022). Bankruptcy Prediction of Shariah-Compliant Securities Companies. 11th Symposium of Innovation and Creativity (SIC 2022). Silver Award. 11 October 2022.

- Saian, R. & Mohd Zakuan, Z. Z. (2021). CaseFinder-A Smartphone App for Searching Legal Cases. 4th Digitalised International Invention, Innovation and Design, Johor 2021. 20 February 2021 23 September 2021 https://play.google.com/store/apps/details?id=com.rizauddin.casefinder
  - Saian R. & Mohd Zakuan Z. Z. (2021). CaseFinder-A Smartphone App for Searching Legal Cases. The 10th Seminar on Innovation and Creativity (SIC 2021). Silver Medal. 12–17 July 2021 https://play.google.com/store/apps/details?id=com.rizauddin.casefinder
  - Saian, R., Teoh, Y. K. & Abu Hasan, S. (2021). Covid-19 SIR Model with Vaccination. 4th International Malaysia-Indonesia-Thailand Symposium on Innovation and Creativity 2021 (iMIT SIC 2021). Bronze Medal. 24 August 2021 https://data-miners.github.io/projects/covid19/
  - Saian, R., Teoh, Y. K. & Abu Hasan, S. (2021). Covid-19 SIR Model with Vaccination. The 10th Seminar on Innovation and Creativity (SIC 2021). Silver Medal / Top 3 Video Award. 12–17 July 2021 https://data-miners.github.io/projects/covid19/
- Saian, R. & Mohd Zakuan, Z. Z. (2018). Smartphone Assisted Legal Writer (SALeW). 1st Digitalised International Invention, Innovation & Design Competition Johor 2018. Gold Medal. 19 April 2018 1 July 2018 https://play.google.com/store/apps/details?id=com.rizauddin.salew
- Saian R., Abdul Halim N., Darus N. A., Mohd Zakuan Z. Z. & Mat Hadzir N. (2017). Research Objectives Aid (ROA). Invention, Innovation & Design Exposition (iidex2017). Bronze Medal. 25–29 August 2017 https://play.google.com/store/apps/details?id=com.rizauddin.roa
  - Saian, R. & Mohd Zakuan, Z. Z. (2017). Smartphone Assisted Legal Writer (SALeW). The International Conference and Competition on Teaching and Learning (i-TeLearN2017). Silver Medal. 16 August 2017 https://play.google.com/store/apps/details?id=com.rizauddin.salew
- Saian, R., Mohd Zakuan, Z. Z., Darus, N. A. & Abdul Halim, N. (20–23 September 2016). Smartphone Assisted Legal Writer (SALeW). Invention, Innovation & Design Exposition (iidex2016). Bronze Medal. https://play.google.com/store/apps/details?id=com.rizauddin.salew
- Saian, R. & Mohd Zakuan, Z. Z., Darus, N. A., Abdul Halim, N., Mat Hadzir, N. (27–30 April 2015). Anti-Plagiarism Graph Generator (APGG). Invention, Innovation & Design Exposition (iidex2015). Gold Medal. https://github.com/rizauddin/apgg
- 2012 Saian, R. & Mohd Zakuan, Z. Z. (7 April 2012). Malay Legal Text Indexer (Malay-LETI). *Invention, Innovation & Design 2012*, Universiti Teknologi MARA (Perlis). Bronze Medal.

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2024 Batch Weight Calculator. 24/1/2024. ref:LY2024P00319.

2023 Statistical Distance Evaluation Calculator. 7/2/2023. ref:CRLY2022W04865.

2021 Halal Manufacturing Validator. 14/3/2021. ref:CRLY2021P02469.

Halal Source Validator, 14/3/2021, ref:CRLY2021P02470.

# **Android Apps Developments**

Google Play https://play.google.com/store/apps/developer?id=Rizauddin+Saian&hl=en\_US

CaseFinder. A helpful tool for students to find legal cases in for Malaysia anywhere and at any time. https://play.google.com/store/apps/details?id=com.rizauddin.casefinder

SALeW-Legal Writing. An app that guide the students throughout the process of answering law questions. https://play.google.com/store/apps/details?id=com.rizauddin.salew

Research Objectives Aid. An app that provide students with a practicing tool in formulating correct keywords for their research objectives in their research paper. https://play.google.com/store/apps/details?id=com.rizauddin.roa

Ukur Tanah. A simple Malaysia land length and area units converter. https://play.google.com/store/apps/details?id=com.rizauddin.ukurtanah

Zakat Calculator. A simple app to calculate Zakat. https://play.google.com/store/apps/details?id=com.rizauddin.zakatcalc

Car Loan Calculator. A simple app to calculate monthly payments for car loan.https://play.google.com/store/apps/details?id=com.rizauddin.carloancalc

Home Loan Calculator. A simple app to calculate monthly payments for home loan.https://play.google.com/store/apps/details?id=com.rizauddin.homeloancalc

Discount Calculator. A simple app to calculate discounted price. https://play.google.com/store/apps/details?id=com.rizauddin.disccalc

# LATEX Template

2021

uitmthesis - uitmthesis is a LaTeX class for writing thesis, dissertation or final year project report. This class was developed based on the "Guidelines on Thesis/Dissertation Format" handbook by IPSis Universiti Teknologi MARA (UiTM).

Overleaf: http://bit.ly/uitmthesis-overleaf

Github (Source Code): https://github.com/rizauddin/uitmthesis

## **Python**

2016

APGG - Anti-Plagiarism Graph Generator

The "Anti-Plagiarism Graph Generator" program is developed to prevent plagiarism in Graph Theory course programming assignments.

Github (Source Code): https://github.com/rizauddin/apgg

### **Invited Talks**

2022

Analitik Data Raya Dalam Pengauditan (Siri 1). Organized by Jabatan Audit Negara. 2 April 2022. Zoom.

2021

Gegar RIG-Semarak Penyelidikan: Proposal. Organized by FSKM, UiTM Perlis. 2 August 2021. Google Meet.

LaTeX Workshop: Writing Thesis in LaTeX for UiTM Students. Organized by FSKM, UiTM Perlis. 22 March 2021. Google Meet.

Optimizing FYP Into Journal Publications. Organized by FSKM, UiTM Perlis. 10, 23, 24 March 2021. Google Meet.

Bengkel Penilaian Peperiksaan Akhir Secara Atas Talian. Organized by FSKM, UiTM Perlis. 1 January 2021. Bilik IT, Perpustakaan Dato' Jaafar Hassan, UiTM Perlis.

2020

Calculus 1 is Easy. Organized by FSKM, UiTM Perlis. 20 June 2020. YouTube Live Streaming.  $\verb|https://youtu.be/a0zQqGvqWHA||$ 

Scientific Programming Using Excel VBA for Beginners. Organized by Persatuan Manatics, UiTM Perlis. LT1, UiTM Perlis.

Introduction to Google Forms. Organized by UiTM Perlis. 19 July 2019.

Video Pitching Workshop. Organized by FSKM, UiTM Perlis. 3 May 2019.

Python Workshop. Organized by Manatics, UiTM Perlis. 19 April 2019.

Mendeley Workshop. Organized by Prodi Teknik Informatika, Universitas Islam Riau. 10 April 2019.

LaTeX Workshop for Students. Organized by Prodi Prodi Teknik Informatika, Universitas Islam Riau. 10 April 2019.

Python Programming. Organized by Prodi Teknik Informatika, Universitas Islam Riau. 10 April 2019

Talk: Data mining – Concept and its Applications. Organized by Prodi Teknik Informatika, Universitas Islam Riau. 9 April 2019.

LaTeX Workshop for Lecturers. Organized by Prodi Teknik Informatika, Universitas Islam Riau. 9 April 2019.

Talk: Data Classification with Ant Colony Optimization. Organized by Prodi Teknik Informatika, Universitas Islam Riau. 8 April 2019.

Video Animation Workshop. Organized by Prodi Teknik Informatika, Universitas Islam Riau. 8 April 2019.

Video Animation for Beginners. Organized by FSKM, UiTM Perlis. 26 October 2018.

Simple LaTeX Tutorial. Organized by FSKM, UiTM Perlis. 20 July 2018. https://github.com/rizauddin/simple-latex-tutorial

Introduction to Python Programming for Calculus. Organized by FSKM, UiTM Seremban 3. 19 October 2017. https://github.com/rizauddin/Lab-Assignment-MAT421

Screencast-o-matic (in "Taklimat Pembangunan MOOCs Storyboard"). Organized by UiTM Cawangan Perlis. 22 May 2017.

Zotero Reference Manager (in "Bengkel Jom tulis Artikel"). Organized by Jabatan Sains Matematik & Statistik, UiTM Cawangan Perlis. 21 April 2017.

Data Science with Ant Colony Optimization (in "50 Shades of Data Science? Real Data Science. Real World. Real Results" Forum). Organized by Axiata Intelligence Unit, Axiata Group Berhad. Axiata Tower, Kuala Lumpur. 5 October 2016.

Android Application Development Workshop. Bilik IT, Perpustakaan Dato' Jaafar Hassan, UiTM Cawangan Perlis. Organized by Jabatan Sains Matematik & Statistik, UiTM Cawangan Perlis. 3 September 2016.

Anti-Plagiarism Graph Generator. Lightning Talk. PyCon MY 2016. International University of Malaya-Wales (IUMW). 27 August 2016.

Android Workshop for CS143. Bilik IT, Perpustakaan Dato' Jaafar Hassan, UiTM Cawangan Perlis. Organized by Jabatan Sains Matematik & Statistik, UiTM Cawangan Perlis. 27 February 2016.

Final Year Project MSP660 Writing Style. Bilik Inovasi, PJI, UiTM Cawangan Perlis. Organized by Jabatan Sains Matematik & Statistik, UiTM Cawangan Perlis. 26 February 2016.

Scientific Programming Using Excel for Beginners: Newton's Method. Lab 1, UiTM Cawangan Perlis. Organized by Jabatan Sains Matematik & Statistik, UiTM Cawangan Perlis. 5 February 2016.

Hybrid Smartphone App Development: An Introduction. Lab 1, UiTM Cawangan Perlis. Organized by Jabatan Sains Matematik & Statistik, UiTM Cawangan Perlis. 22 January 2016.

2015 Android Apps Development. Lab 2, UiTM Cawangan Perlis. 17 September 2015.

Python Programming. Bilik IT, Perpustakaan Dato' Jaafar Hassan, UiTM Cawangan Perlis. Organized by iLQAM UiTM Cawangan Perlis. 14 May 2015.

2013 Marking Assignment Electronically (e-marking). Bilik IT, Perpustakaan Dato' Jaafar Hassan, UiTM Cawangan Perlis. Organized by iLQAM UiTM Cawangan Perlis. 27 September 2013.

Kursus EndNote. Bilik IT, Perpustakaan Dato' Jaafar Hassan, UiTM Cawangan Perlis. Organized by iLQAM, UiTM Cawangan Perlis. 22 January 2013.

2009 Bengkel Kemahiran Komputer (Membina Blog). Makmal 9, UiTM Cawangan Perlis. Organized by Jabatan Sains Matematik & Statistik, UiTM Cawangan Perlis. 2 October 2009.

Bengkel Latex. Makmal Komputer (Pensyarah), UiTM Cawangan Perlis. Organized by Unit Penyelidikan, Pembangunan & Pengkomersilan (URDC), UiTM Cawangan Perlis. 17 June 2008.

Bengkel DreamWeaver. Makmal Bahasa 3 & 4, UiTM Cawangan Perlis. Organized by Akademi Pengajian Bahasa, UiTM Cawangan Perlis. 12–13 April 2006.

Bengkel Matematik (Maple). Makmal Komputer 3, UiTM Cawangan Perlis. Organized by Persatuan Q-Sciences, UiTM Cawangan Perlis. 26 March 2006.

2005

Bengkel Penggunaan Microsoft Access. Makmal Komputer 3, UiTM Cawangan Perlis. Organized by DICE, UiTM Cawangan Perlis. 29–30 June 2005.

Bengkel Pemantapan Perisian Microsoft Excel. Makmal Bahasa 3, UiTM Cawangan Perlis. Organized by Jabatan Sains Matematik & Statistik, UiTM Cawangan Perlis. 18 April 2005.

### **Publications**

2024

Zainol, A. Z., Saian, R., Kin, T. Y., Mohd Razali, M. H., & Bakar, S. A. (2024). An enhanced ant colony optimisation algorithm with the hellinger distance for shariah-compliant securities companies bankruptcy prediction. In Journal of Information and Communication Technology (Vol. 23, Issue 1, pp. 1–24). https://doi.org/10.32890/jict2024.23.1.1

2023

Mohamed, M., Saian, R., Ramli, N., Mohamad Nor, H., & Soid, S. K. (2023). Calculus III For Pure And Applied Sciences. Penerbit UiTM. https://www.mindappz.com/Promo/Product/103081-5159

Teoh, Y. K., Saian, R., & Abu Hasan, S. (2023). Analysis and simulation of modified susceptible-infected-recovered model with vaccination for COVID-19 outbreak. International Journal of Mathematics in Operational Research, 24(4), 537–553. https://doi.org/10.1504/IJMOR.2023.130117

2022

Nasution, A. H., Fitri, S. E., Saian, R., Monika, W., & Badruddin, N. (2022). Determining intermediary closely related languages to find a mediator for intertribal conflict resolution. Information (Switzerland), 13(12), 557. https://doi.org/10.3390/info13120557

Mohd Razali, M. H., Saian, R., Moktar, B., Bee Wah, Y., & Ku-Mahamud, K. R. (2022). Performance of ACO-based decision tree algorithm with imbalanced class data sets—A heuristic approach. 2022 3rd International Conference on Artificial Intelligence and Data Sciences (AiDAS), 29–38. https://doi.org/10.1109/AiDAS56890.2022.9918761

Mohd Zakuan, Z. Z., & Saian, R. (2022). Cyberbullying victimization during COVID-19: Psychological effects and the legal measures. International Journal of Public Health Science, 11(1), 232–239. https://doi.org/10.11591/ijphs.v11i1.21047

Saian, R., & Mohd Zakuan, Z. Z. (2021). Casefinder: A Non-Law Students Smartphone App for Legal Writing. 2021 3rd International Conference on Modern Educational Technology, 13–19.

Mohd Razali, M. H., Saian, R., Yap, B. W., & Ku-Mahamud, K. R. (2021). An improved ACO-based decision tree algorithm for imbalanced datasets. International Journal Mathematical Modelling and Numerical Optimisation, 11(4), 412–427.

Mohd Razali, M. H., Saian, R., Yap, B. W., & Ku-Mahamud, K. R. (2021). A class skew-insensitive ACO-based decision tree algorithm for imbalanced data sets. Indonesian Journal of Electrical Engineering and Computer Science, 21(1), 412–419.

Anwar, N. H. K., Saian, R., & Bakar, S. A. (2021). An enhanced ant colony optimization with Gini index for predicting type 2 diabetes. AIP Conference Proceedings, 2365(1), 020004.

2020

Saian, R., Mohd Zakuan, Z. Z., Hashim, H., & Mahmood, A. (2020). Smartphone app for searching legal cases for non-law students. International Journal on Emerging Technologies, 11(4), 419–422.

Saian, R., Mohamad Fauzi, N. S. F., Mohd Zakuan, Z. Z., Hashim, H., & Mahmood, A. (2020). Predicting attackers of cyberbullying using ant colony optimization in combating psychological effects among the victims. International Journal on Emerging Technologies, 11(5), 205—208.

Anwar, N. H. K., & Saian, R. (2020). Predictive Accuracy for Two Diabetes Datasets using Ant-Miner Algorithm. International Journal of Scientific and Technology Research, 9(4), 239–242.

Kadir, E. A., Dayana, N. E., Rosa, S. L., Othman, M., & Saian, R. (2020). Prediction of Hotspots in Riau Province, Indonesia Using the Autoregressive Integrated Moving Average (ARIMA) Model.

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