NORAINI IBRAHIM

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EDUCATION

2023	*Ph.D in Mathematics,* **Universiti Teknologi Malaysia (UTM), Johor Bahru, Johor.** **Thesis:** *Improved Least Squares Support Vector Machine for Johor River Flow Forecasting during Structural Break* **Specialization:** *Data Analytic, Machine Learning, Forecasting, Time Series, Robust Regression.*
2014	*M.Sc. in Computer Science,* **Universiti Teknologi Malaysia (UTM), Johor Bahru, Johor** **Thesis:** *Time Series Support Vector Regression Models with Missing Data Treatments for Water Level Prediction*
2008-2011	*B.Sc. in Industrial Mathematics* **Universiti Teknologi Malaysia (UTM), Johor Bahru, Johor**

PERSONAL

D.O.B: 06 June 1989; **Nationality:** Malaysian; **Language:** Bahasa Malaysia, English.

PROFESSIONAL SOCIETIES

Malaysian Mathematical Sciences Society (PERSAMA) – No: NB2024-2
Malaysian Statistical Institute (ISM) – No: 1333

PROFESSIONAL CERTIFICATES

Data Science in Python: Regression, *Maven Analytics*, ID:115421793.
Data Science in Python: Classification, *Maven Analytics*, ID: 116767644.
Statistics for Data Analysis, *Maven Analytics*, ID: 116895404.

ACADEMIC APPOINTMENTS

Senior Lecturer, Universiti Malaysia Pahang Al-Sultan Abdullah (January 2025-Present)
Senior Lecturer, Universiti Tunku Abdul Rahman (February 2024-January 2025)
Part Time Full Time (PTFT) Lecturer, Universiti Teknologi Mara (UiTM), Kampus Jengka, Pahang (October 2023-January 2024)
Lecturer, Universiti Tunku Abdul Rahman (February 2022-February 2023)

OTHER EMPLOYMENTS

2020-2022	**Research Assistant**, Department of Mathematical Sciences, Universiti Teknologi Malaysia, Johor. • Managing administration for FRGS and ERGS grants. • Working on river flow prediction using wavelet improved Least Squares Support Vector Regression.
2011-2013	**Research Assistant**, Department of Computer Science, Universiti Teknologi Malaysia, Johor. • Managing administration for GUP, FRGS and ERGS grants. • Working on time series Support Vector Regression for water level prediction.
Jan 2013-July 2013	**Tuition Teacher** at Keris Laksamana Bijak Intelek, Johor.
Apr 2010 - Jul 2010	**Internship** at Agrobank Sdn. Bhd., Kelantan.

PROFESSIONAL SERVICES

Jury for Poster Competition ISMI 2024, *Forum Mathematics for Industry 2024 (FMfI2024), International Seminar on Mathematics in Industry 2024*, organised by UTM Centre for Industrial and Applied Mathematics (UTM-CIAM), Department of Mathematical Science, Faculty of Science, UTM, on 10 September 2024.

Invited Speaker, *Webinar Beyond Boundaries: Uniting Mathematicians, Computer Scientists, and Statisticians for Cross Disciplinary Problem Solving*, organised by Kolej Pengajian Pengkomputeran, Informatik & Matematik, Universiti Teknologi Mara, Cawangan Johor, Kampus Segamat, on 02 September 2024.

Book Chapter Reviewer (2024)

- Title of Book: Mathematics Matters in Malaysian Industries
- Title of Chapter: 1. Quadruple Helix Model for Industrial Mathematics Infrastructure in Malaysia.
  2. Critical Thinking and Problem Solving Skills Assessment Towards Industry-Ready Graduates.
- Publisher: Penerbit UTM Press

Trainer for Sun Fun Art Academy, *Summer Camp 2024 (Science Activities)*, organized by Sun Fun Art Academy, on 15 July 2024 to 30 July 2024.

ACADEMIC PUBLICATIONS

1. **Noraini Ibrahim**, Norhaiza Ahmad, Nur Amalina Mat Jan, Zanariah Zainuddin, Nurul Syafidah Jamil, & Ammar Azlan (2024). **Comparative Analysis of ARIMA and LSTM Approaches for Monthly River Flow Forecasting in Terengganu**, *2024 5th International Conference on Artificial Intelligence and Data Sciences (AiDAS), Bangkok, Thailand*.
2. **Noraini Ibrahim** & Norhaiza Ahmad (2024). **Improved Least Squares Support Vector Machine in the Presence of Structural Break for Johor River Flow Forecasting.** *Malaysian Journal of Industrial and Applied Mathematics (MATEMATIKA).*
3. Tiong Sze Yen, Nur Amalina Mat Jan, **Noraini Ibrahim**, Zanariah Zainuddin, Nur Balqishanis Zainal Abidin, Loshini Thiruchelvam, Muhammad Fadhil Marsani (2024). **Probability Distribution Model for Flood Prediction in the Trolak River, Perak**, *2024 5th International Conference on Artificial Intelligence and Data Sciences (AiDAS), Bangkok, Thailand*.
4. May May Tan, Zanariah Zainuddin, **Noraini Ibrahim**, Nur Amalina Mat Jan, Nurul Syafidah Jamil, & Norliana Muslim (2024). **Intrusion Detection System (IDS) Classifications using Hyperparameter Tuning for Machine Learning and Deep Learning**, *2024 5th International Conference on Artificial Intelligence and Data Sciences (AiDAS), Bangkok, Thailand*.

5. Owen Chin, Nurul Syafidah Jamil, **Noraini Ibrahim**, Zanariah Zainuddin & Nur Amalina Mat Jan (2024). **OYEN: A User-Centric LLM-Based Bilingual Healthcare Chatbot**, *2024 5th International Conference on Artificial Intelligence and Data Sciences (AiDAS), Bangkok, Thailand.*
6. **Noraini Ibrahim** & Norhaiza Ahmad (2017). **Comparative Performance of Support Vector Regressions for Accurate Streamflow Predictions**, *Malaysian Journal of Fundamental and Applied Sciences (MJFAS*), pp 325-330
7. **Noraini Ibrahim** & Antoni Wibowo (2014). **Support Vector Regression with Missing Data Treatment based Variables Selection for Water Level Prediction of Galas River in Kelantan Malaysia**. *WSEAS Transaction on Mathematics*, Vol 13, pp 69-78.
8. **Noraini Ibrahim** & Antoni Wibowo (2013). **Partial Least Squares Regression based Variables Selection for Water Level Prediction**, *American Journal of Applied Sciences (AJAS)*, Vol (10), pp 322-330.
9. **Noraini Ibrahim** & Antoni Wibowo (2012)**. Prediction of Water Level in Dungun River Terengganu using Partial Least Squares Regression**, *International Journal of Basic and Applied Sciences (IJBAS/IJENS)*, Vol (12), pp 1-7.

RESEARCH GRANTS

Optimizing CNN Models through Adaptive Hyperparameter Tuning for Medical Images
Grant: UTARRF
Researchers: Zanariah Zainudin (Leader), Noraini Ibrahim, Nur Amalina Mat Jan & Nurul Syafidah Jamil
Amount: RM24000

UNDERGRADUATE STUDENTS, FINAL YEAR PROJECTS

1. Fan William. Predicting River Flow in Terengganu using Support Vector Machine and Deep Learning LSTM.
2. Teoh Xu Xian. Monthly River Flow Forecasting in Kelantan with Arima and Deep Learning LSTM.
3. Lim Chun Keat. Development of e-Pet Apps.
4. Lim Ming Xuan. e-Clean House Apps for Kampar Residential.

TEACHING COURSES

UTAR Courses	Level	UiTM Pahang (PTFT) Courses	Level
1.Business Analytics UCCB3133	Bachelor	1.Intensive Mathematics MAT037	Pre-Diploma
2.Mini Project UCCB2513	Bachelor		
3.Database Development and Applications UCCD1203	Bachelor	2.Business Mathematics MAT112	Pre-Diploma
4.Database Systems UCCD2203	Bachelor		

AWARD AND ACHIEVEMENTS

- Excellent Teaching Performance for UCCD1203 Database Development and Applications (4.72).
- Excellent Teaching Performance for UCCD2203 Database Systems (4.67).