What's what PSPM

UNDERSTANDING AND OVERCOMING MATH ANXIETY:
STRATEGIES FOR ACADEMIC SUCCESS !

UNLOCKING THE POWER OF NUMBERS:
WHY DO WE STUDY MATHEMATICS?

LEARNING HEAT EQUATION THROUGH GAMES

IS DATA SCIENTIST STILL THE SEXIEST JOB FOR 2024?

DASCA IN ACTION:
PREDICTIVE MODELING SERIES

Nurul Nisa' Khairol Azmi, Az'lina Abdul Hadi, Noorezatty Mohd Yusop, Nurul Aini Abdul Wahab, Nuralina Azlan, Zaitul Anna Melisa Md Yasin, Nornadiah Mohd Razali
Pengajian Sains Matematik
Kolej Pengajian Pengkomputeran, Informatik dan Matematik, Universiti Teknologi MARA (UiTM),
Cawangan Negeri Sembilan, Kampus Seremban, 70300, Negeri Sembilan Darul Khusus, Malaysia.
nurul7654@uitm.edu.my

The Predictive Modeling Series is a knowledge-sharing program dedicated to enhancing analysis and modeling skills. It is a collaborative effort between the Special Interest Group Data Science and Predictive Analytics (SIG DASCA) and the College of Computing, Informatics, and Mathematics (KPPIM) at UiTM Negeri Sembilan Seremban Campus.

Figure 1: During the Workshop

On November 15 and 16, 2023, the Predictive Modeling Series: Time Series Analysis and Forecasting using R programming was successfully conducted at the Library of Tun Abdul Razak, UiTM Negeri Sembilan, Seremban Campus, running from 9:00 am to 4:30 pm as shown in Figure 1. The event attracted a total of 17 beginners and 14 intermediate participants who registered for Course I and Course II of the workshop, respectively. Participants included academicians, industry professionals, and postgraduate students.

The program aimed to equip participants with the principles of Time Series Analysis and Forecasting for effective data analysis. Moreover, it provided hands-on training in utilizing R programming software for conducting Time Series Analysis and Forecasting. Additionally, the program aimed to support researchers in finding optimal solutions to research challenges through the application of the techniques.

As shown in Figure 2, the workshops were led by in-house trainers and facilitators, Dr. Nurul Nisa' Khairol Azmi, Puan Isnewati Ab. Malek, and Puan Noreha Mohamed Yusof, distinguished experts in Time Series Analysis and Forecasting from UiTM Negeri Sembilan Seremban Campus. On the first day, participants received invaluable insights into forecasting time series data using techniques such as Exponential Smoothing for beginners and ARIMA. On the second day, the team delved into the GARCH model for intermediate practitioners, all within the framework of R programming.

Figure2: Active Discussion Between Trainer and Participant

In addition to knowledge-sharing sessions, the workshop provided significant practical benefits to all participants, offering hands-on experience in developing time series applications using Shiny R. The success of the program was ensured by the involvement of eighteen dedicated committees, facilitating smooth execution and achievement of its objectives. Notably, the program generated substantial gross revenue totaling RM6,630.00, which has been directed to Tabung Amanah KPPIM, further supporting its initiatives.
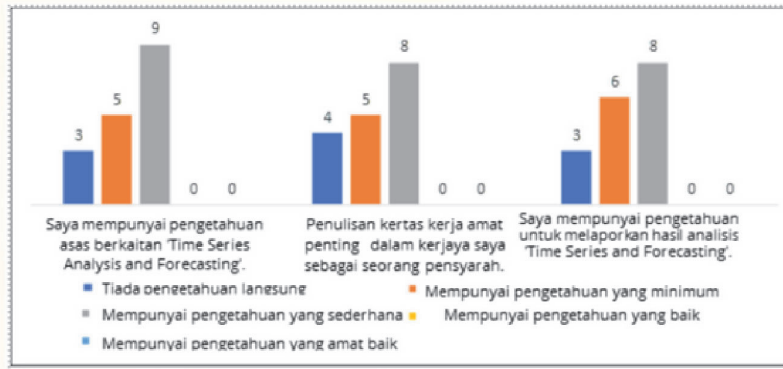
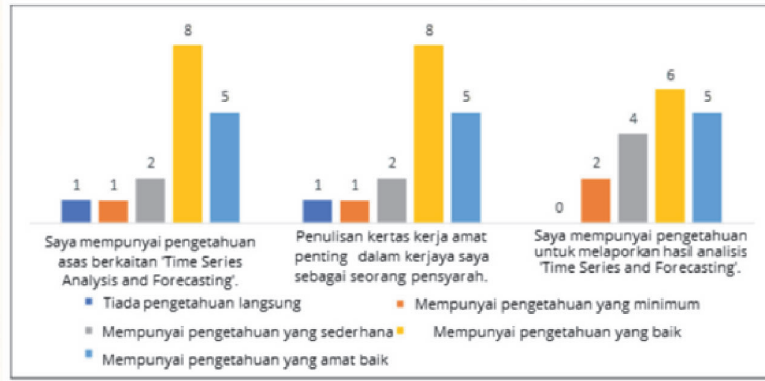Figure 3: Feedback Before the Workshop

Figure 4: Feedback After the Workshop

From the participant's feedback (see Figure 3 and Figure 4), the workshop shows a significant increase in participants' knowledge and utilization of "Time Series Analysis" after attending. This indicates a positive impact of the program on the participants. Most participants expressed their satisfaction with the organization of the workshop.

Figure 5: Photo Session with All Participants

Overall, this workshop has effectively delivered both theoretical understanding and practical skills, leveraging R and Shiny software. After completing the course, as can be seen in Figure 5, all participants were very happy. Participants have significantly improved their capabilities in data analysis and modeling. The upcoming series will further explore advanced methodologies, emerging technologies, and industry applications, keeping participants abreast of innovation in this evolving field. This program will continue to be held regularly to support income generation initiatives for UiTM Negeri Sembilan Seremban Campus, particularly for KPPIM.