
RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES

REMACS 5.0



CS240 - BACHELOR OF INFORMATION TECHNOLOGY [HONS.]
CS248 - BACHELOR OF SCIENCES [HONS.]
MANAGEMENT IN MATHEMATICS
CS251 - BACHELOR OF COMPUTER SCIENCE [HONS]
NETCENTRIC COMPUTING
CS255 - BACHELOR OF COMPUTER SCIENCE [HONS]
DATA COMMUNICATION & NETWORKING

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Universiti Teknologi MARA Perlis Branch

**Research Exhibition in Mathematics and Computer Sciences
(REMACS 5.0)**

Research Exhibition in Mathematics and Computer Sciences (REMACS 5.0)

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Preface

It is with great pleasure that we present this extended abstract book, titled "The 5th Research Exhibition in Mathematics and Computer Sciences (REMACS 5.0)". This book is a collection of research work in the fields of Computer Science and Mathematics, contributed by the final year students from Universiti Teknologi MARA, Perlis Branch. The aim of this book is to showcase the diversity and depth of research in these two interrelated fields.

Mathematics and Computer Science are two fields that have seen tremendous growth and advancement in recent years. With the rise of new technologies and the increasing demand for data-driven solutions, researchers in these fields have been working hard to develop new theories, algorithms, and models that can help solve some of the most pressing problems of our time. This book is a testament to their hard work and dedication.

The abstracts in this book cover a wide range of topics, including algebra, analysis, logic, computer architecture, algorithms, artificial intelligence, machine learning, computer network, netcentric computing and many more. The work presented here is both theoretical and practical, and has the potential to impact many areas of society, from finance and healthcare to education and security.

We hope that this book will serve as a valuable resource for future students in the fields of Mathematics and Computer Science. We also hope that it will inspire more students to pursue innovative and groundbreaking research in these two fields. Finally, we would like to express our gratitude to all the contributors for their hard work and dedication, without which this book would not have been possible.



RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES
REMACS 5.0

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EVENT SCHEDULE

8:00 – 8:30 am

- Registration

8:00 am – 12:00 pm

- FYP Project Presentation

12:00 - 2:00pm

- Lunch Break

2:15 – 2:35 pm

- National & Wawasan Setia Anthems
- Doa Recitation

2:35 – 2:45 pm

- Welcoming Address by Director of REMACS 5.0

2:45 – 2:55 pm

- Officiating & Closing Remarks from Rector of UiTM Perlis

2:55 – 3:00 pm

- REMACS 5.0 Montage

3:00 – 4:00 pm

- Awarding of Winners:
 - Best Poster
 - Best Project Award
- Photo Session
- End of Ceremony

Dress Code: Formal / Corporate

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EXTENDED ABSTRACTS

RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES
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A FUZZY CONJOINT ANALYSIS APPROACH FOR EVALUATING CREDIT CARD SERVICES: A CASE STUDY OF MALAYAN BANK

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Abstract

This study evaluate credit card services offered by Malayan Bank using a fuzzy conjoint analysis approach. This method allows for the consideration of imprecise and uncertain information, which is particularly relevant in the context of evaluating customer perceptions of credit card services. The study collected responses from 50 customers of Malayan Bank who have a credit card, and applied the fuzzy conjoint analysis approach to determine the most important attributes and levels of importance among the customers. The results indicate that customers place a high importance on the credit ceiling, follow by period of purchase and lastly penalty fee offered by the bank. This study provides a valuable insight for Malayan Bank to improve their credit card services and to attract more customers by focusing on these attributes.

Keywords: Fuzzy conjoint analysis, credit card, credit ceiling, attribute

6. Introduction

The state of Perlis was chose in approach for evaluate the credit card service. In order to overcome the economic situation that can be happen in the future, people need to understand the used of credit card. In order to understand what drives customers to use credit cards, it is important to identify the attributes that have the most influence. Once these attributes have been identified, we can then rank credit card packages using different combinations of attributes and levels, such as credit ceiling, period of purchase, and penalty fee, to determine which package is preferred by the customer.

7. Methodology

The data were collected responses from 50 individuals who are currently employed in the Perlis. Once we have these responses, we can begin the process of determining the weight of each attribute (w_i) using a calculation method. Next, we need to find the membership value of each element in set L, which represents the attributes that were identified in the responses. After that, we need to determine the degree of similarity between set L and set R_k , which represents the group requirements. The attribute with the highest degree of similarity will be chosen as the most important. Finally, we will list the ranking for each group requirement based on the degree of similarity.

8. Results and Discussion

In the recent depiction of credit card, from private bank and from the customer, there is no other ways other than understanding the used of credit card and all of it function. This is complicated and creating the controversy. Base on the respond of the respondent according to the questionnaire 26 people do strongly agree with package 10 which have the highest credit ceiling 80%, the longest period of purchase which is 60 days and the lowest penalty fee 5%. While there is 25 people were strongly disagree with package 9 that have the lowest credit

ceiling which is 40%, shortest period of purchase which is 30 days and the highest penalty fee 10%. This article will reveal what is want by potential customer before they decide to purchase for this service and how well the knowledge is need to be a well money planner.

9. Novelty of Research / Product

There have been a number of research that have investigated the approach for evaluate the credit card services, particularly those who intended to improve the credit card services and to know the preference of their potential customer. In finding the perception of customer (Nur Liyana & Zurina Kasim, 2022). In previous research about credit card was done through the approach for evaluating credit card services: a case study of iranian bank (Baheri et al., 2011). There also been several research about fuzzy conjoint method (R Osman et al 2019). Therefore, the main focus of this research is how to improve the credit card services that can influence potential customer to purchase the credit card. All in the research aim to calculate the analysis using the fuzzy conjoint analysis in making the future more bright and systematic. There will always be a competition between every private bank in order to gain more customer

10. Conclusion

After analyzing various credit card packages, it was determined that package 1, 8, 10, and 12 have the best rank. All of these packages have a penalty fee of 5%, and two out of them have the highest credit ceiling of 80%. On the other hand, package 6 and 9 were found to be the worst packages. Both of these packages have the combination of the lowest credit ceiling of 40% and the highest penalty fee of 10%. Note that due to the fuzzy nature of the data, some of these packages were placed in one class.

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