UNIVERSITI TEKNOLOGI MARA
Perlis Branch
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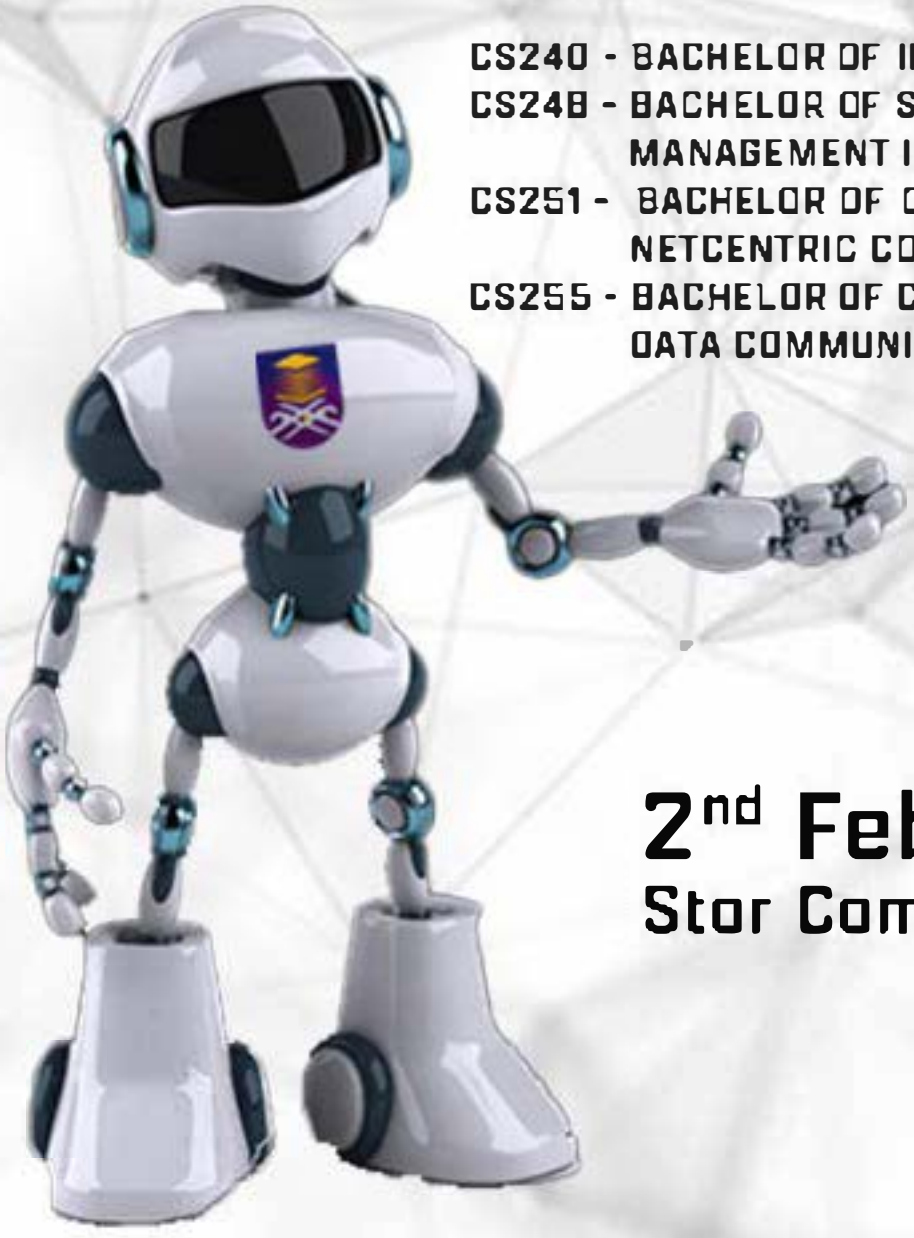
RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES

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

2nd Februory 2023

Stor Complex, UiTM Perlis

Organized by:
College of Computing, Informatics and Media
Universiti Teknologi MARA Perlis Branch

Research Exhibition in Mathematics and Computer Sciences (REMACS 5.0)

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Editors
Rafiza Ruslan, Mohamad Najib Mohamad Fadzil, Noorfaizalfaird Mohd Nor, Mohammad Hafiz bin Ismail

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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.

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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

List of Papers

RESEARCH EXHIBITION IN MATHEMATICS & COMPUTER SCIENCES

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EXTENDED ABSTRACTS

DATA VISUALIZATION ON STUDENT STRESS LEVEL

Nur Syifa Ramzi, Mohammad Hafiz bin Ismail and Tajul Rosli Razak
College of Computing, Informatics and Media, Universiti Teknologi MARA Perlis Branch, Malaysia

Abstract

Stress has become part of students' academic life due to the various internal and external expectations placed upon their shoulder. Therefore, this research is to visualize on student stress level among universities students. The objective of this project is to analyze the retrieved data on the level that affects students' stress, to visualize the stress levels among university students relate to their issues and to evaluate the proposed visualization dashboard on student stress level using User Acceptance Test (UAT). The method used in the visualization is Microsoft Power BI which allows user to search for data, convert, visualize, and share the dashboards that user create to public. Secondary data from Figshare website was selected to obtain a dataset to be studied using a Power BI. This research will also help individuals build strong interpersonal relationships and deal with stress in their everyday lives by using visual representations of statistical data analysis, thereby making it easier and available to everyone.

Keywords*: student stress level, issues, data visualization, Microsoft Power BI*

1. Introduction

The outcomes of this project will assist students to determine their stress levels based on their causes of stress, which will aid students in addressing obstacles relating to their problem and selecting which area or problems they must improve. Following that, to visualize the stress levels among university students in relation to their issues. For example, by seeking strategies for resolving problems and making better judgments in the future through the dashboard created by Microsoft Power BI. Last, the development will evaluate the proposed visualization dashboard of student stress level using acceptance test (UAT) in google form. With the assistance of this initiative, students and others will have a better grasp of how to manage with stress and stay focused while solving problems.

2. Methodology

The System Development Life Cycle, a waterfall approach, will be used for this project. Research methodology is an organized project management process that contains standards, definitions, and descriptions of the procedures used to gather, store, analyze, and show data. The five stages approach employed in this research are the planning phase, the analysis phase, the development phase, the testing phase, and the documentation phase of the data system. Every description and detail are critical in visualizing the effects of student stress, which is essential to fulfil the project's objectives. Also, to aid or enable persons in student life in collaborating by taking action to solve difficulties that students are coping with stress.

3. Results and Discussion

Data visualization is required to gain a better understanding of the effect of student stress. Therefore, this project intended to construct a data visualization using Microsoft Power BI to evaluate the obtained data on the level that influences students' stress. The approach has been established in usability testing to indicate that the responder is comfortable and agrees with every feature of the dashboard assessed. The dashboard created is simple and straightforward to use for the user to obtain information on the causes of student stress levels. Furthermore, the responder response is mostly good, allowing individuals to observe the effect of student stress in better comprehension using a Microsoft Power BI.

4. Novelty of Research / Product

Recently, various research has been done using university students as subjects. According to Ugarte et al., (2019) stress in people is caused by work, studies, economic problems, and family problems among others, and it affects their wellbeing causing deterioration in mental and physical health of the individual. Thus, we should recognize it is significant importance to detect stress before it turns into severe major problems (Mounika et al., 2019). To prevent future adjustment problems, voluntary shut-ins, and school dropouts, the research was comprehended to the lifestyle and amount of stress in university students and to make their problems clear (Tarui & Mizuno-matsumoto, 2009). Moreover, data visualisation is required to gain a better understanding to the effect of student stress level in this dashboard. This initiative will help students who are having problems forming good interpersonal relationships or dealing with stress in their daily life.

5. Conclusion

This study met its goals, which included visualizing student stress levels and obtaining student stress data. The dashboard was efficiently displayed in Microsoft Power BI, allowing users to understand the stress management method. Finally, this study will raise awareness regarding student stress alternatives, which should be of interest to everyone.

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