

Universiti Teknologi MARA

**SmartPack: Weather Based Travelling Attire Recommender System
for East Asian Countries**

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**Thesis submitted in fulfilment of the requirements for Bachelor of
Information Technology (Hons.) Faculty of Computer and
Mathematical Sciences**

JULY 2025

ACKNOWLEDGMENT

Praise be to Allah, the most Gracious and the most Merciful. I greatly appreciate His unfathomed blessings, directions, and powers which have assisted me to successfully finish this SMARTPACK project in its entirety. I would wish to thank my supervisor, Madam Asiat Bt Mat, heartily, because of the constant support, guidance, and feedback provided during this project process. The positive feedback and continual motivation assisted me to enhance my work in a step-by-step manner. I would like to express my utmost gratitude to my beloved parents, who always pray and sacrifice and support me in whatever I do. The fact that you believed in me has been my greatest motivating factor in this process.

I would also like to express my gratitude to Dr. Muhammad Firdaus Bin Mustapha who provided me with valuable guidance and instructions which helped to develop the course of this project in the direction it has taken today. I would like to give special thanks to my fellow students of CSP650 and to all my friends who supported me, cheered me up and gave me strength during bad times. All the steps of this project became easier due to the people who always appeared by my side. I am so grateful to you and all your guidance and encouragement, and it has had such a big role in my personal and academic development. I am thankful.

ABSTRACT

SMARTPACK is a weather recommender system of travel attire that was created to help travellers, particularly those in tropical monsoon areas, to make the right clothing choices when travelling to East Asian countries. These areas have different and erratic weather conditions, and it is difficult to know what to bring with you as a tourist. The goal of this project is to deliver real-time location-based suggestions of attire to consider the temperature, humidity, and weather conditions by relying on weather APIs and clothing insulation values (Clo). The app is created as a mobile solution within Android Studio, with data management provided by Firebase, and smart tips created with the use of AI. SMARTPACK enables each user to enter the place they are going to travel and dates, after which it creates a personalized wardrobe package considering the climatic conditions in the region. The system was designed using the Waterfall model in the structured phases of requirement analysis, design, implementation and testing. The effectiveness of the system and the satisfaction of users were confirmed with the help of usability testing with the help of System Usability Scale (SUS). The outcome is a context sensitive, reliable tool that will improve travel planning by alleviating packing mistakes and increasing the preparedness of the user to different weather conditions.

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CHAPTER 1

INTRODUCTION

In chapter 1, there will be a discussion about background study, problem statement, research question, research objectives, research scope, project significance, expected outcome and project limitation.

1.1. Background of Study

East Asia is a diverse region that provides travellers with the chance to see historic sites from earlier times, vibrant modern cities, relaxing countryside, and unique cultural customs. However, a wide range of climatic conditions are produced by the region's diverse geography. Rainfall rises in the Yangtze River Basin and southern Japan from early to late June. It then spreads to northern China, Korea, and eastern and northern Japan until mid-July(Sugimoto et al., 2024). Seasons change in countries like China, South Korea, and Japan, with hot summers, freezing winters, and unpredictable spring and autumn transitions. While inland regions might see many variations in temperature, coastal areas may experience humidity and typhoons. Travellers find it difficult to predict what kind of clothing they should wear to ensure comfort during their trip.

This project title is SMART PACK: Weather Based Travelling Attire Recommender System for East Asian Countries are one of the projects to overcome these many problems. In recent years, people use weather and clothing information from online sources to decide what to wear each day(Nakano et al., 2016). There are many generic packing guides online or through the travel agencies but not many offers an accurate information about the appropriate attire to wear based on the current weather at that time. These guidelines often provide broad advice that ignores differences in weather between places, such as coastal and inland areas or mountain and city climate.