SCHOOL OF COMPUTING
Faculty of Engineering

Project Proposal Form MCST1043
Sem: 2 Session: 2024/25

SECTION A: Project Information.

Program Name:	**Masters of Science (Data Science)**
Subject Name:	**Project 1 (MCST1043)**
Student Name:	Choong Zi Xuan
Metric Number:	MCS241038
Student Email & Phone:	choongzixuan@graduate.utm.my 018-7836386
Project Title:	Understanding the impact of demographics on the travel mode choices of urban residents
Supervisor 1:	
Supervisor 2 / Industry Advisor(if any):	

SECTION B: Project Proposal

Introduction:

Transportation is very important for a country especially for urban areas. Transportation is greatly influenced by demographics factors. Understanding how demographics factors affect the travel mode choices of urban residents is important for developing effective transportation policies. In this project aims to analyze the influence of demographics, to improve the transportation and promote sustainable transportation options.

Problem Background:

Increasing urbanization led to increasing the traffic jam. Understanding the relationship between demographic factors such as age, income and education level with resident's travel mode choices can inform policies to encourage the use of public transportation and reduce traffic jam.

Problem Statement:

There is important on understanding travel behavior but there is limited research on how demographics factors affect travel mode choice among urban residents. This project aims to analyzing these relationships and predicting travel mode choices based on demographics characteristics.

Aim of the Project:

To analyze the effect of demographics factors on mode choice for urban residents develop a predictive model to forecast future transportation trends.

Objectives of the Project:

1. To analyze how demographics factors affect travel mode choice among urban residents.
2. To develop a predictive model to forecast travel mode choice based on demographic data.
3. To provide actionable insights and recommendations for improving public transport system and promoting sustainable commuting.

Scopes of the Project:

1. Focus on urban areas with significant residents' population
2. Implement machine learning techniques to analyze and predict travel mode choice
3. Provide visualizations and reports

Expected Contribution of the Project:

This project will provide valuable insights into the impact of Malaysia's demographics structure on travel behavior. This will help to strengthen public transport system and promote sustainable commuting options.

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Project Requirements:

Software: _____ Python

Hardware: _____

Technology/Technique/
Methodology/Algorithm: _____ Data preprocessing and predictive modeling
_____

Type of Project (Focusing on Data Science):

[/]   Data Preparation and Modeling

[/]   Data Analysis and Visualization

[   ]   Business Intelligence and Analytics

[/]   Machine Learning and Prediction

[   ]   Data Science Application in Business Domain

Status of Project:

[   ]   New

[   ]   Continued

If continued, what is
the previous title? _____

SECTION C: Declaration

I declare that this project is proposed by:

[   ]   Myself

[   ]   Supervisor/Industry Advisor (   )

Student Name: Choong Zi Xuan _____

7/4/2025

_____   _____
Signature   **Date**

SECTION D: Supervisor Acknowledgement

The Supervisor(s) shall complete this section.

I/We agree to become the supervisor(s) for this student under aforesaid proposed title.

Name of Supervisor 1:   _____

_____   _____
Signature   **Date**

Name of Supervisor 2 (if any):   _____

_____   _____
Signature   **Date**

SECTION E: Evaluation Panel Approval

The Evaluator(s) shall complete this section.

Result:

[   ] FULL APPROVAL   [   ] CONDITIONAL APPROVAL (Major)*

[   ] CONDITIONAL APPROVAL (Minor)   [   ] FAIL*

* Student has to submit new proposal form considering the evaluators' comments.

Comments:

Name of Evaluator 1: ....

Signature **Date**

Name of Evaluator 2: ....

Signature **Date**