UTM UNIVERSITI TEKNOLOGI MALAYSIA RESEARCH UNIVERSITY	**SCHOOL OF COMPUTING** **FACULTY OF ENGINEERING** **UNIVERSITI TEKNOLOGI MALAYSIA**

PSM 1 (SCSJ 3032)
PROJECT PROPOSAL FORM

Session/Semester: 2022/2023-2

Instruction: Please complete and submit this form to the departmental PSM committee. The proposal must be reviewed by the supervisor before submission.

SECTION A: STUDENT INFORMATION

Name	JOHN MATTHEW HAYUN BANAYAD		
Year/Course	**4 SCSJ**		
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Proposal No. 1 *(Please follow your preference. Proposal No. 1 – the highest priority, followed by Proposal No. 2 Each student may propose a maximum of 2 topics).*

SECTION B: PROJECT DETAILS

Supervisor Name:	PROF. MADYA. TS. DR. MOHD SHAHIZAN BIN OTHMAN
Project Title:	Using Decision Tree or Support Vector Machines Algorithms to Analyze Microclimate Data in Aiding the Safeguarding of Cultural and Historical Architectures

Problem Background and Proposed Solution:

Cultural and Historical Architectures suffer from deterioration over time as they are exposed to the elements, and with the current maintenance method being reactive, a lot of Cultural and Historical Architectures receive their maintenance too late. To solve this issue, a more active approach is proposed by using machine learning algorithms such as Decision Tree or Support Vector Machines (VSM) algorithms to monitor the microclimate changes to perform maintenance before its too late.

Objectives:

1) To compare and analyze Decision Tree and Support Vector Machines algorithms, and to choose the most appropriate algorithm.
2) To create a user-friendly interface displaying real-time microclimate data as well as giving recommendations in maintenance to aid government officials in safeguarding Cultural and Historical Architectures.

Scopes:

The purpose of this research is to aid in the preservation and safeguarding of Cultural and Historical Architectures in Johor Bahru, Malaysia by using machine learning algorithms. To do so, a comparison between the Decision Tree algorithm and the Support Vector Machines algorithm will be made to determine the most suitable algorithm to be used, and a prototype of the interface will be created as well.

Project Requirements:

Software	**:** Windows
Hardware	**:** Personal Computer
Technology/Technique/ Method/Algorithm	**:** Decision Tree, Support Vector Machines
Network Elements	**:** ……..……
Security Elements	**:** ……..……

Project Type: *(Please tick one)*

[ ] System Development

[✓] Research

Project Area:

Area **:** Machine Learning

(e.g.: *Security – Cryptography*)

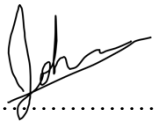
SECTION C: STUDENT ACKNOWLEDGEMENT

I confirm that this project is:

[ ] My own idea

[✓] Proposed by the supervisor… PROF. MADYA. TS. DR. MOHD SHAHIZAN BIN OTHMAN

Date: April 5, 2023 Student Signature: ……..……...



SECTION D: SUPERVISOR ACKNOWLEDGEMENT

I …… PROF. MADYA. TS. DR. MOHD SHAHIZAN BIN OTHMAN …… confirm that I have reviewed this student's project proposal and therefore agree for the proposal to be submitted for evaluation.

Date **:** April 5, 2023 Signature **:** ……

Official Stamp

SECTION E: EVALUATION PANEL APPROVAL

Outcome:

[ ] Full Approval
[ ] Conditional Approval (Minor)
[ ] Conditional Approval (Major)
[ ] Fail

Notes (*Please state reasons for conditional or failed approval)*

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Evaluation Panel:

1. ……..
2. ……..

Date: …… Signature: …..……

Name: …..…….

SECTION F: FOR FACULTY COMMITTEE ONLY

Date Received: …….

Signature : ……. (Official Stamp)