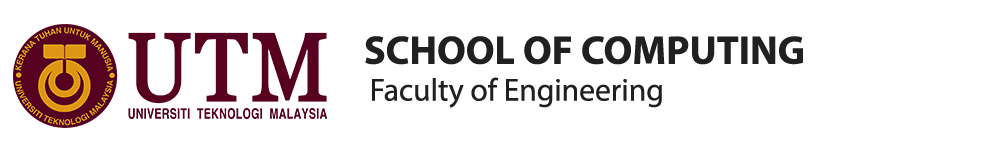
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Project Proposal Form MCST1043

Sem: 2 Session: 2024/25

**SECTION A: Project Information**.

|  |  |  |
| --- | --- | --- |
| Program Name: | **Masters of Science (Data Science)** | |
| Subject Name: | **Project 1** | **(MCST1043)** |
| Student Name: | | Sivarajan A/L S.Esvaran | | |
| Metric Number: | | MCS241051 | | |
| Student Email & Phone: | | [sivarajan@graduate.utm.my](mailto:sivarajan@graduate.utm.my) | | |
| Project Title: | | Unleashing Potential Sales Opportunities in Direct Selling through Data Analysis and | | |
|  | | Data Visualization Strategy for Amway Distributors | | |
| Supervisor 1: | |  | | |
| Supervisor 2 / Industry Advisor(if any): | |  | | |

**SECTION B: Project Proposal**

**Introduction**:

|  |
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| Direct selling and also known as person to person sales is a business model allowing individuals to sell products directly |
| to customers in the absence of a physical store. Amway is among many companies that empower millions of direct | |
| distributors worldwide through this model. However, the majority of these sellers operate in absence of business intelligence | |
| system and relying instead on manual monitoring, their own intuition or previous experiences and knowledge in making | |
| their sales decisions. In light of the growing availability of data as well as user friendly data analytic tool and data | |
| visualisation tool to assist distributors in identifying patterns in customers’ behaviour, sales trends and the product refund | |
| or return issues. The purpose of this project to examine how these tools can enhance this direct selling business | |
| performance as well as data-driven decision making. | |

**Problem Background**:

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| The direct sellers themselves usually lack of training, time or tools required to utilise data effectively in their business. They |
| generally do not have deeper access to advanced data analytics tool but they acomplished complex task such as inventory |
| management, customer targeting and timing for promotion. Mismatches in demand and supply, poorly timed promotion |
| as well as unclear on customers’ preferences are some of common problems. By modeling or projecting online retail |
| transaction data, which is similar to Amway sales trends, the project will be able to deliver useful insights through data |
| visualisation and segmentation of customers, giving distributors a better grasp of their businesses. |
|  |

**Problem Statement**:

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| Data analysis and visualisation can uncover trends, customer behaviour patterns as well as return or refund challenges in |
| direct selling companies such as Amway in several ways. |
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**Aim of the Project**:

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| The aim of the project is to study and display retail transaction data conserning direct selling companies such as Amway |
| In order to : | |
| 1. Recognise trends in sales within different time of periods. | |
| 1. Identify the customers segments which return highest profits. | |
| 1. Highlight patterns in returns and refund of sold products. | |
| 1. Provide recommendation based on the analysed data to increase monthly and annual sales. | |
|  | |

**Objectives of the Project**:

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| --- |
| To examine and present sales data across intervals of time for instance, monthly or seasonaly. |
| To identify the top performing and lowest performing products’ categories. |
| To recognise trends in returns and refunds across the products’ categories and demoghraphics of customers. |
| To provide suggestions for increasing sales from the insights gathered thorugh data analysis and visualisation tools. |
|  |

**Scopes of the Project**:

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| Data of one year time period from a distributor’s Amway online retail system will be utilised for this project. |
| The data will be aquired from order history of an Amway distributor from 1st April 2024 to 1st April 2025. The research will |
| focus on explolatory data analysis, visualisation of trends and customers’ segmentations. |
|  |

**Expected Contribution of the Project**:

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| The visual report will allow direct sellers to track their performance and make informed decisions. |
| A structure for leveraging low cost, user friendly tools such as Pyhton, Power BI and Excel to analyze sales data. |
| Strategic insights customised for Amway distributors, comprising the best time to promote certain products, identify the |
| most valuable customers, most frequent causes of product returns and ways to reduce the product returns. This data analysis |
| and visualisation tool will equip independent distributors who might not possess technical skills with use of data driven |
| decisions. |
|  |

**Project Requirements**:

|  |  |
| --- | --- |
| Software: | Phyton, Power BI and Excel |
| Hardware: |  |
| Technology/Technique/ Methodology/Algorithm: | Exploratory Data Analysis, Visualisation |
|  |

**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: |  |

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|  |  |  |  |
| **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.**

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| Name of Supervisor 1: |  |

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|  |  |  |  |
| **Signature** |  | **Date** |  |
| Name of Supervisor 2 (if any): |  | | |

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| **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:**

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| Name of Evaluator 1: |  |

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| **Signature** |  | **Date** |  |
| Name of Evaluator 2: |  | | |

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| **Signature** |  | **Date** |