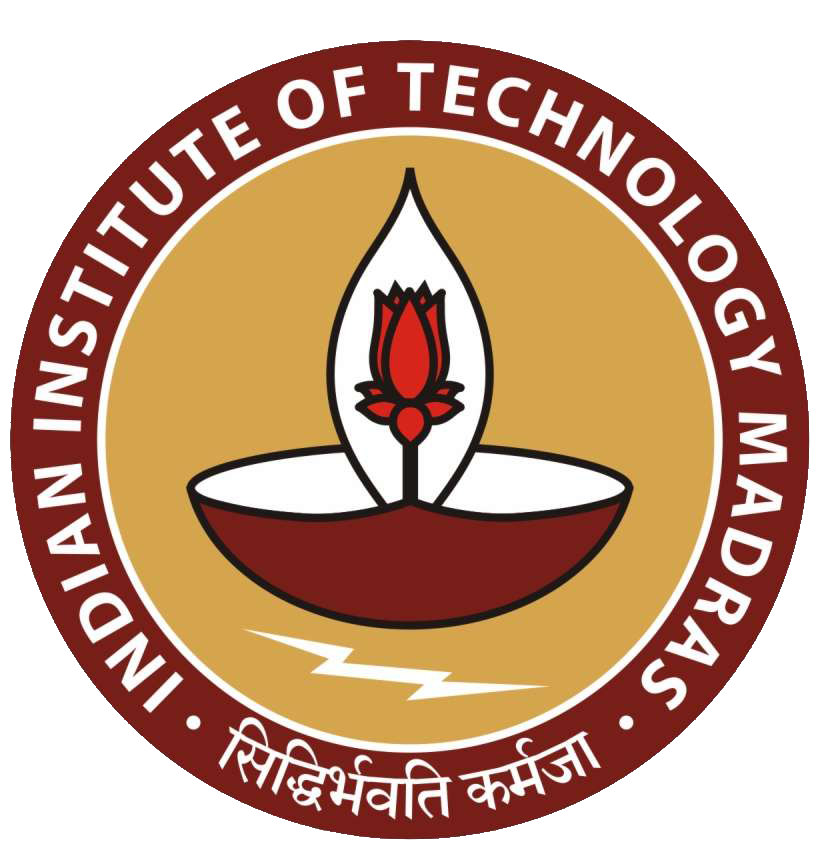
**CAPSTONE PROJECT FINAL SUBMISSION**

**ICE CREAM ON A STICK**

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1. **Executive Summary**

There are millions of street vendors in India, and Sunil Yadav is also one of them. He has been selling ice cream for five years and maintains their sales data in many diaries. In this report, the analysis has been done based on the data received from the vendor. The data has been collected for 1 month (19 February–18 March). It contains sales data on the number of ice creams sold each day for different flavour.

During the pandemic, their sales were almost zero, and after the pandemic, their sales did not grow much as compared to pre-pandemic time. After COVID, a new problem has arrived for street vendors that many people like to order the product through an online platform, and many people prefer digital transactions (UPI) over cash.

In the analysis process, we entered all the raw data into Excel, and then the data had to be categorised into some columns, such as selling price, revenue generated, expenses, miscellaneous, etc. From the revenue chart, we can deduce that the revenue generated on weekends is greater than the revenue generated on weekdays. This final submission includes an executive summary, detailed explanation of the analysis process/method, result and findings, an interpretation of the results, and recommendation.

The detailed analysis is explained in the upcoming sections.

1. **Detailed Explanation of Analysis Process/Method**

Ms Excel is the main tool for the analysis collected raw data and collected data in an unstructured format. After entering the raw data into excel, basic pre-processing has done like sorting, searching, replace etc.

**2.A** **Day wise Analysis**

In these tables, we can see that on Saturday and Sunday, the number of ice cream pieces sold is higher than on the remaining days, and this pattern holds for all four weeks. The total number of pieces includes all flavours like vanilla, chocolate, chocobar, butterscotch, etc.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Days | Number of pieces sold per day (Week 1) | Number of pieces sold per day (Week 2) | Number of pieces sold per day (Week 3) | Number of pieces sold per day (Week 4) |
| Monday | 216 | 231 | 221 | 215 |
| Tuesday | 198 | 226 | 216 | 209 |
| Wednesday | 223 | 243 | 211 | 204 |
| Thursday | 253 | 250 | 253 | 232 |
| Friday | 242 | 290 | 300 | 248 |
| Saturday | 312 | 342 | 362 | 289 |
| Sunday | 373 | 384 | 400 | 347 |

Figure 1

**2.B Revenue Analysis of Week 1**

In the revenue analysis table, there are 5 columns representing days, revenue generated per day, expense per day, miscellaneous, and gross profit per day. This table shows the data for week 1. From the data given below, we can see that the revenue and gross profit are higher on Saturday and Sunday compared to the other days.

The total gross profit of week 1 is ₹ 6,707.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Days | Revenue generated per day | Expense per day | Miscellaneous | Gross profit per day |
| Monday | ₹ 4,515.00 | ₹ 3,539.00 | ₹ 240.00 | ₹ 736.00 |
| Tuesday | ₹ 4,135.00 | ₹ 3,245.00 | ₹ 240.00 | ₹ 650.00 |
| Wednesday | ₹ 4,970.00 | ₹ 3,905.00 | ₹ 240.00 | ₹ 825.00 |
| Thursday | ₹ 5,310.00 | ₹ 4,160.00 | ₹ 240.00 | ₹ 910.00 |
| Friday | ₹ 5,265.00 | ₹ 4,139.00 | ₹ 240.00 | ₹ 886.00 |
| Saturday | ₹ 6,750.00 | ₹ 5,300.00 | ₹ 240.00 | ₹ 1,210.00 |
| Sunday | ₹ 8,030.00 | ₹ 6,300.00 | ₹ 240.00 | ₹ 1,490.00 |
|  |  |  |  |  |
| Total |  |  |  | ₹ 6,707.00 |

Figure 2

**2.C Revenue Analysis of Week 2**

In this revenue analysis table for week 2, the revenue and gross profit are higher on weekends compared to weekdays. The revenue generated for week 2 on weekends is ₹ 7,720 and ₹ 8,470 which is slightly more than from weekends in week 1. The gross profit of week 2 on the weekend is ₹ 1,407 and ₹ 1,570 which is more than from the weekend of week 1.

The total gross profit of week 2 is ₹ 7,722.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Days | Revenue generated per day | Expense per day | Miscellaneous | Gross profit per day |
| Monday | ₹ 5,255.00 | ₹ 4,137.00 | 240 | ₹ 878.00 |
| Tuesday | ₹ 4,995.00 | ₹ 3,927.00 | 240 | ₹ 828.00 |
| Wednesday | ₹ 5,595.00 | ₹ 4,404.00 | 240 | ₹ 951.00 |
| Thursday | ₹ 5,460.00 | ₹ 4,287.00 | 240 | ₹ 933.00 |
| Friday | ₹ 6,535.00 | ₹ 5,140.00 | 240 | ₹ 1,155.00 |
| Saturday | ₹ 7,720.00 | ₹ 6,073.00 | 240 | ₹ 1,407.00 |
| Sunday | ₹ 8,470.00 | ₹ 6,660.00 | 240 | ₹ 1,570.00 |
|  |  |  |  |  |
| Total |  |  |  | ₹ 7,722.00 |

Figure 3

**2.D Revenue Analysis of Week 3**

In this revenue analysis table for week 3, the revenue generated for week 3 on weekends is ₹ 8,010 and ₹ 9,025, which is slightly more than the revenue from weekends in week 2. The gross profit of week 3 over the weekend is ₹ 1,466 and ₹ 1,677, which is more than from the weekend in week 2, which is ₹ 1,407 and ₹1,570.

The total gross profit of week 3 is ₹ 7,667.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Days | Revenue generated per day | Expense per day | Miscellaneous | Gross profit per day |
| Monday | ₹ 4,735.00 | ₹ 3,715.00 | ₹ 240.00 | ₹ 780.00 |
| Tuesday | ₹ 4,780.00 | ₹ 3,761.00 | ₹ 240.00 | ₹ 779.00 |
| Wednesday | ₹ 4,835.00 | ₹ 3,808.00 | ₹ 240.00 | ₹ 787.00 |
| Thursday | ₹ 5,775.00 | ₹ 4,550.00 | ₹ 240.00 | ₹ 985.00 |
| Friday | ₹ 6,750.00 | ₹ 5,317.00 | ₹ 240.00 | ₹ 1,193.00 |
| Saturday | ₹ 8,010.00 | ₹ 6,304.00 | ₹ 240.00 | ₹ 1,466.00 |
| Sunday | ₹ 9,025.00 | ₹ 7,108.00 | ₹ 240.00 | ₹ 1,677.00 |
|  |  |  |  |  |
| Total |  |  |  | ₹ 7,667.00 |

Figure 4

**2.E Revenue Analysis of Week 4**

In this revenue analysis table for week 3, the revenue generated for week 4 on weekends is ₹ 6,480 and ₹ 7,930, which is slightly less than from weekends in week 3, which is   8,010 and ₹ 9,025. The gross profit of week 4 on the weekend is ₹ 1,138 and ₹ 1,438 these are less than from the weekend in week 3, which is ₹ 1,466 and ₹ 1,677.

The total gross profit of week 4 is ₹ 6,637.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Days | Revenue generated per day | Expense per day | Miscellaneous | Gross profit per day |
| Monday | ₹ 4,720.00 | ₹ 3,713.00 | ₹ 240.00 | ₹ 767.00 |
| Tuesday | ₹ 4,570.00 | ₹ 3,594.00 | ₹ 240.00 | ₹ 736.00 |
| Wednesday | ₹ 4,780.00 | ₹ 3,775.00 | ₹ 240.00 | ₹ 765.00 |
| Thursday | ₹ 5,140.00 | ₹ 4,048.00 | ₹ 240.00 | ₹ 852.00 |
| Friday | ₹ 5,555.00 | ₹ 4,374.00 | ₹ 240.00 | ₹ 941.00 |
| Saturday | ₹ 6,480.00 | ₹ 5,102.00 | ₹ 240.00 | ₹ 1,138.00 |
| Sunday | ₹ 7,930.00 | ₹ 6,252.00 | ₹ 240.00 | ₹ 1,438.00 |
|  |  |  |  |  |
| Total |  |  |  | ₹ 6,637.00 |

Figure 5

1. **Result and Finding**

**3.A Sales of product day wise (Week 1)**

In Figure 6, we can see that the number of pieces sold is almost constant or slightly increasing from Monday to Friday. But after Friday, there is a sharp growth in product sales. Sunday is the highest-selling day.

Figure 6

**3.B Sales of product day wise (Week 2)**

In Figure 7, we can see that the number of pieces sold is almost constant from Monday to Thursday. But from Thursday to Sunday, the sales growth rate is increasing. Sunday is the highest selling product day.

Figure 7

**3.C Sales of product day wise (Week 3)**

From the below chart, we can see that the number of pieces sold is slightly decreasing from Monday to Wednesday. But from Thursday to Sunday, the growth rate is very close to linear. Sunday is the highest selling product day, and Wednesday is the least.

Figure 8

**3.D Sales of product day wise (Week 4)**

In Figure 9, we conclude that the number of pieces sold is slightly decreasing from Monday to Wednesday. But from Thursday to Sunday, the growth rate has been slightly increasing.

Figure 9

**3.E Flavours analysis (week 1)**

In this report, we discussed different flavour of ice cream, including vanilla, chocolate, strawberry, butterscotch, kulfi, etc. There are in total nine different flavours. In Figure 10, we can clearly see that the chocolate is the most popular among all flavours and American nuts are the least popular. The total number of pieces sold is 338 for chocolate flavour, and the total number of pieces sold is 70 for American nuts in week 1.

The vanilla and chocobar are the second most popular flavour.

Figure 10

**3.F Flavours analysis (week 2)**

From Figure 11, we observe that the total number of pieces sold for chocolate flavours is 324 and the total number of pieces sold for American nuts is 84. There is a decline in the growth rate of sales of chocolate flavour from week 1 to week 2, and the growth rate for American nuts is increasing from week 1 to week 2. In week 2, the most popular flavour is chocolate, and the least popular is American nuts. Vanilla is the second most popular flavour.

Figure 11

**3.G Flavours analysis (week 3)**

From Figure 12, the most popular one is chocolate flavour, and the least popular flavour is American nuts in week 3. The chocobar and kulfi are the second most popular flavours. The number of pieces of chocolate sold is 316 which is less than week 1 and week2. We can see that the sales of American nuts flavours are continuously increasing from week 1 to week 3.

Figure 12

**3.H Flavours analysis (week 4)**

From figures 10, 11, and 12, we conclude that the most popular flavour is chocolate, but in week 4, the most popular flavour is now chocobar, and the least popular is American nuts but the sales of American nuts are continuously increasing or constant throughout all weeks.

Figure 13

**3.I Revenue analysis day wise (Week 1)**

From the revenue analysis graph, we can clearly see that on Sunday, the revenue generated was ₹ 8,030, which is the highest in week 1, and on Tuesday, the revenue generated was ₹ 4,135, which is the lowest in week 1. From Wednesday to Sunday, the growth is increasing except for Friday.

Figure 14

**3.J Revenue analysis day wise (Week 2)**

In the revenue analysis graph, it is obvious that the revenue generated on weekends is more than the other days, and the revenue on weekends is ₹ 8,470 and ₹ 7,720. From Thursday to Sunday, the growth rate is close to linear.

Figure 15

**3.K Revenue analysis day wise (Week 3)**

From the revenue analysis graph, we can conclude that most of the revenue comes from weekends. From Monday to Wednesday, the growth rate is almost constant, and from Thursday to Sunday, the revenue is increasing and is very close to being linear. The revenue on the weekend is ₹ 8,470 and ₹ 7,720.

Figure 16

**3.L Revenue analysis day wise (Week 4)**

In Figure 17, we can clearly see that the revenue is increasing from Tuesday to Sunday, and more revenue comes from Sunday, which is ₹ 7,930 and less revenue from Tuesday.

The least revenue comes from Tuesday which is ₹ 4,570. From Monday to Wednesday the growth rate is increasing or decreasing.

Figure 17

**3.M Gross profit analysis day wise (Week 1)**

This gross profit analysis considered the factors that influenced revenue, expense, and miscellaneous costs. From Figure 18, we conclude that the gross profit on weekends is higher than the weekdays. Gross profit growth rates are fluctuating, especially during mid-weekdays and sharp growth during weekends.

Figure 18

**3.N Gross profit analysis day wise (Week 2)**

In Figure 19, we clearly see that from Thursday to Sunday, the gross profit growth rate is increasing, and from Monday to Wednesday, the growth rate is slightly fluctuating. The highest gross profit comes from Sunday and Saturday, while the lowest gross profit comes from Tuesday.

Figure 19

**3.O Gross profit analysis day wise (Week 3)**

In Figure 20, the gross profit growth rate is almost constant from Monday to Wednesday, while from Thursday to Sunday the growth rate is very close to linear.

The gross profit on Saturday and Sunday are ₹ 1,466 and 1,677. The least gross profit comes from Tuesday, which is ₹ 779.

Figure 20

**3.P Gross profit analysis day wise (Week 4)**

From the above gross profit chart, we conclude that the highest gross profit comes from Sunday, and this is also true in this case. The gross profit on Saturday and Sunday are ₹ 1,138 and 1,438. The least gross profit comes from Tuesday, which is ₹ 736.

Figure 21

1. **Interpretation of Results and Recommendation**

**4.A Revenue throughout weeks**

The case study shows that the overall revenue grows every week, which is a good sign of a healthy business. In the first week of the month, Tuesday generates the minimum revenue in a month, which is ₹ 4,135 and in the third week of the month, Sunday generates the maximum revenue, which is ₹ 9,025. Every Sunday generates more revenue than the remaining days in the week.

Figure 22

**4.B Gross profit week wise**

The figure 23 shows the gross profit of all 4 weeks. With the help of the below chart, we can see that gross profit increases day by day in all four weeks. Saturday and Sunday are the most profitable days of the month. The gross profit growth rate on Monday and Tuesday is almost constant. The conclusion is that the weekend generates more gross profit.

Figure 23

**4.C Total number of quantity sold for each flavour**

The below graph represents sales of the quantity of each flavour. In Figure 24, we can observe that chocolate is the most popular flavour and the least popular flavour is American nuts in the month.

Figure 24

**Recommendation**

* To increase demand, the vendor should charge less for American nuts flavours.
* Installing a QR code scanner at the ice cream stand would undoubtedly raise sales.
* To increase customer attraction, the vendor should install a dustbin at the stall.
* To attract children, the vendor should include cheap plastic toys with those ice creams which are low in sales volume.
* To increase his sales, he should sell outside schools and parks.
* Need to reach out to more mohallas, crowded places and melas.