

**KULLIYAH OF INFORMATION AND COMMUNICATION TECHNOLOGY**

**CSC 1706 PROBABILITY AND STATISTICS**

**SEMESTER 2, 2017/2018**

**SECTION 4**

**GROUP 4**

**DATA: UNEMPLOYMENT RATE STATISTICS IN MALAYSIA IN YEAR 2011, 2012 AND 2013**

**PREPARED BY:**

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**Introduction**

The data that our group has chosen to analyse is regarding the unemployment rate categorized by state in the years 2011, 2012 and 2013 by the Department of Statistics Malaysia. The data shows the total number of people that are unemployed in each state in Malaysia. The type of our data is population since we are studying the number of people. The type of statistics involved is descriptive statistics which consists of collection, organization, summarization and presentation of data. The type of data is quantitative discrete since our data can be ranked and there should not be any fractions in the data.

**Unemployment rate by state in 2011**

|  |  |
| --- | --- |
| **State** | **Percentage (%)** |
| Johor | 2.5 |
| Kedah | 3.5 |
| Kelantan | 2 |
| Malaysia | 3.1 |
| Melaka | 0.7 |
| Negeri Sembilan | 3 |
| Pahang | 2.6 |
| Perak | 2.6 |
| Perlis | 4 |
| Pulau Pinang | 1.9 |
| Sabah | 5.6 |
| Sarawak | 4.1 |
| Selangor | 2.4 |
| Terengganu | 3.2 |
| W.P Labuan | 4.2 |
| W.P. Kuala Lumpur | 3 |
| W.P.Putrajaya | 1.1 |
| **Total** | **49.5** |

**Unemployment rate by state in 2012**

|  |  |
| --- | --- |
| **State** | **Percentage (%)** |
| Johor | 3.1 |
| Kedah | 2.9 |
| Kelantan | 2.3 |
| Malaysia | 3 |
| Melaka | 0.5 |
| Negeri Sembilan | 3 |
| Pahang | 2.7 |
| Perak | 3 |
| Perlis | 3.9 |
| Pulau Pinang | 2 |
| Sabah | 5.6 |
| Sarawak | 3.5 |
| Selangor | 2.3 |
| Terengganu | 3 |
| W.P Labuan | 4.6 |
| W.P. Kuala Lumpur | 2.7 |
| W.P.Putrajaya | 1.5 |
| **Total** | **49.6** |

**Unemployment rate by state in 2013**

|  |  |
| --- | --- |
| **State** | **Percentage (%)** |
| Johor | 2.8 |
| Kedah | 2.4 |
| Kelantan | 2.8 |
| Malaysia | 3.1 |
| Melaka | 0.7 |
| Negeri Sembilan | 3.1 |
| Pahang | 2.8 |
| Perak | 3.8 |
| Perlis | 3.7 |
| Pulau Pinang | 1.7 |
| Sabah | 5.3 |
| Sarawak | 3.7 |
| Selangor | 2.4 |
| Terengganu | 3.4 |
| W.P Labuan | 4.1 |
| W.P. Kuala Lumpur | 3.3 |
| W.P.Putrajaya | 1.2 |
| **Total** | **50.3** |

**Method**

For the method, we will construct a bar graph to represent each data according to year. Then, we will construct a pie chart by calculating the percentage of frequencies for each category in each data set. We also will construct the time series graph that represents the data which occurs over the years. We will also find the measures of central tendency which consists of the mean, median, mode, midrange, and weighted mean to find the average of the data set. To determine the spread of data values, we will find the measures of variation which consists of the range, variance and standard deviation of the data set. Through this method, we know how the data values are dispersed. Moreover, we will find the measures of position to describe the data such as its relative position. This measure consists of percentiles, deciles and quartiles. Finally, we will do an exploratory data analysis to construct the boxplot of each data set (2011, 2012 and 2013) by using five-number summary.