

Data Management

MDM4U

Qinghao Hu

November 7, 2025

Contents

1	Unit 1	2
1.1	Lecture 1	2
1.1.1	The Fundamental or Multiplicative Counting Principle	2
1.1.2	Additive Counting Principle	2
1.2	Lecture 1.2	2
1.3	Like Term Permutations	2
1.4	Pascal Triangle	3
1.5	Venn Diagrams	3
1.6	Combination	3
2	Unit 2, Probability	4
2.1	Probability	4
2.1.1	Definitions of Probability	4
2.1.2	Definitions of other stupid stuffs	4
2.1.3	Formulas	5
2.1.4	Examples	5
2.2	Dependent Events	5
2.2.1	Definitions	5
2.3	Mutually Exclusive Events	5
2.3.1	Some boring Definitions	5
3	One Variable Statistics	7
3.1	Variables and Data	7
3.1.1	Definitions	7
3.2	One Variable Graphs	8
3.2.1	Some Definitions	8
3.3	Central Tendency	10
3.3.1	Definitions of Central Tendency	10
3.4	Standard Deviation	11
3.5	Quartiles	12
3.5.1	Definitions	12
3.5.2	Percentiles	13
3.6	Spread Grouped Data	14
3.6.1	For weighted data	14
3.7	Collect data	14
3.7.1	Anonymous and not be anonymous	14
3.7.2	Survey Questions	14
3.7.3	Questions should be avoided	14
3.7.4	Experimental vs Observational study	15
3.8	sampling	15
3.8.1	Some type of sampling	15
3.9	Bias	16

4 Two variable Statistics	17
4.1 Apply linear Regression	17
4.1.1 RESIDUAL	17

Chapter 4

Two variable Statistics

4.1 Apply linear Regression

Outliers

When you handle outliers, a good way is to creating two models to describe the relationship, one model includes the outliers and the other does not.

4.1.1 RESIDUAL

The **Residual** values that correspond to each respective data from a LINEAR regression