1.2 Lesson Summary - Egad It's Excel

**Microsoft Excel** is a GUI based spreadsheet management application that provides users with an intuitive visual interface for collecting, organizing, manipulating, and visualizing data. Excel’s intuitiveness and ease-of-use makes it an ideal starting point for data analytics.

Concept: Excel enables a user to perform mathematical operations on their data through the use of formulas. Formulas can contain functions such as the following:

**SUM** for calculating sums for example: *=SUM(A1:A10)*

**AVG** for calculating averages for example: *=AVG(A1:A10)*

* Activity: 01-Ins\_ExcelPlayground

Concept: **Named Ranges** can be used to specify groups of Excel cells

* Activity: 02-Ins\_NamedRanges

Concept: Formulas can include control flow logic using if-then style syntax. This can take the form of:

**If Then** statement to return a value based on a conditional check, for example: *=IF(A1>5, “that value is greater than 5”, “that value is less than 5”)*

**COUNTIF** will count a value if the specified condition is met, for example: *=COUNTIF(A1,">5")*

* Activity: 03-Ins\_ColorCounter

Concept: It is often useful to calculate the **measures** **of central tendency** of data which refers to **mean**, **median**, and **mode**. Excel offers AVG function for mean and:

**MEDIAN** calculates the middle value of a dataset, for example: *=MEDIAN(A1:A10)*

**MODE.SNGL** and **MODE.MULT** calculate the most frequent value, for example: *=MODE.SNGL(A1:A10)*

* Activity: 05-Ins\_CentralTendency

Concept: Data can be formatted either by using its values or by selecting sections of a worksheet to format

* Activity: 07-Ins\_Formatting

Concept: Data can be reorganized in ways to make it more revelatory through the use of **Pivot Tables**

* Activity: 09-Ins\_PivotTables, 10-Stu\_TopSongsPivot, 12-Stu\_ProductPivot

Concept: Data can be searched through using the following functions:

**VLOOKUP** searches through data vertically returning the value of the column specified, for example: *=VLOOKUP(A4,$E$4:$G$7,3,FALSE)*

**HLOOKUP** searches through data horizontally returning the value of the row specified, for example: *=HLOOKUP(A4,$E$4:$H$6,3,FALSE)*

* Activity: 11-Ins\_Lookups

Excel offers a wide range of tools for working with data and is extremely useful in data analytics.