Using Excel for Statistical Analysis

You don't have to have a fancy pants statistics package to do many statistical functions. Excel can perform several statistical tests and analyses.

First, make sure you have your Data Analysis Tool pack installed.

You should see Data Analysis on the far right of your tool bar.

	6	ه (
iil -	💾 Data Analysis	
Es.	Analysis	

If you don't see it go to FILE | OPTION| ADD INS and add the Analysis Tool.

General		
ochelar	View and manage Microsoft C	Office Add-ins.
Formulas		
Proofing	Add-ins	
Save	Name 🛎	Location
Language	Active Application Add-ins	
Language	Analysis ToolPak	C:\fice\Office14\Library\
Advanced		
	Inactive Application Add-ins	
Customize Ribbon	Analysis ToolPak - VBA	C:\\Office14\Library\Ana
	Custom XML Data	C:\iles\Microsoft Office
Quick Access Toolbar	Date (XML)	C:\iles\Microsoft Share
	Euro Currency Tools	C:\ft Office\Office14\Lit
dd-Ins	Financial Symbol (XML)	C:\lles\Microsoft Shared
rust Center	Headers and Footers	C:\iles\Microsoft Office
ust center	Hidden Rows and Columns	C:\iles\Microsoft Office
	Hidden Worksheets	C:\iles\Microsoft Office
	Invisible Content Microsoft Actions Pane 3	C:\iles\Microsoft Office
	Solver Add-in	CI. Coll Official Difference
	Solver Add-in	C:\fice\Office14\Library
	Document Related Add-ins	
	No Document Related Add-ins	
	Disabled Application Add-Ins	
	No Disabled Application Add-ins	

Learn about your data

Load the Analysis ToolPak

- 1. Click the File tab, click Options, and then click the Add-Ins category.
- 2. In the Manage box, select Excel Add-ins and then click Go.
- 3. In the Add-Ins available box, select the Analysis ToolPak check box, and then click OK.

Tip If Analysis ToolPak is not listed in the Add-Ins available box, click Browse to locate it.

If you are prompted that the Analysis ToolPak is not currently installed on your computer, click Yes to install it.

File H	lome	Insert Pa	age Layout	Formulas	Data R	view	View	/ Ado	i-Ins										۵
From From Access Web	From Text	From Other Sources *	Existing Connections	Refresh	 Connections Properties Edit Links 	A↓ Z↓ A↓	A Z A Sort	Filter	Ҡ Clear 💫 Reapply 🌠 Advanced	Text to Columns	Remove Duplicates	Data Validation	Consolidate	What-If Analysis *	Group	Ungroup	₿ ₽ ₽	■ Hide Detail	💾 Data Analysis
	Get Ext	ernal Data		Co	onnections		1	Sort & Filt	ter			Data Tool	s			C	utline	Gi.	Analysis
A1		- (e)	fx																

Data analysis tool can do several things at once

Data Analysis		2 23
<u>A</u> nalysis Tools		ОК
Anova: Single Factor Anova: Two-Factor With Replication Anova: Two-Factor Without Replication Correlation Covariance	* E	Cancel Help
Descriptive Statistics Exponential Smoothing F-Test Two-Sample for Variances Fourier Analysis Histogram	•	

Example data from http://www.pewsocialtrends.org/category/datasets/

1. Descriptive Statistics

Example – Age of the responders

- Click Data, then Data Analysis
- Click on "Descriptive Statistics"
- Select range
- Ok
- 2. Frequencies
 - 1. Create a "bing range"
 - 2. Go to data, data analysis, select histogram

Bin Range	Data Analysis 🛛 🖇 🕱
1	
2	Analysis Tools
3	Anova: Single Factor
4	Anova: Two-Factor With Replication Anova: Two-Factor Without Replication Cancel
5	Correlation Covariance Descriptive Statistics Exponential Smoothing F-Test Two-Sample for Variances Fourier Analysis Histogram

Histogram		? ×
Input Input Range: Bin Range:	\$J\$2:\$J\$2143 \$R\$2:\$R\$6	ОК Cancel <u>H</u> elp
Output options Output Range: New Worksheet Ply: New Workbook 		
P <u>a</u> reto (sorted histogram) Cu <u>m</u> ulative Percentage		

Adding relative frequencies

https://www.youtube.com/watch?v=0_hREtfcmpA

(by hand)

3. Crosstabulation

<u>https://www.youtube.com/watch?v=kMeoFIdVRA4</u> <u>https://www.youtube.com/watch?v=z3RkOJ2a4_E</u> (check minute 5 to add percentages)

 Click on a cell, right click, select "value field settings" value rieg settings

Summarize Values By	Show Va	lues As		
Show v <u>a</u> lues as				
% of Column Total				
Base field:		Base ite	m:	
ID Language Who should pay	*			
norma arrandia pary				
	-			-

- Select "Show Values As"
- E.g. % column total

-