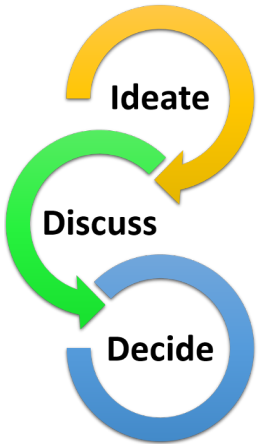
Excel for Data Analysis II

Follow along at: http://bit.ly/excel-analysis-ii

See the code at: http://bit.ly/excel-analysis-ii-code

Introduction to Data Analytics Review



Our Method for Generating Ideas (Brainstorming)

Ideate - Generate at least 3 ideas (ideally more), each on their own Post-It Notes
Discuss - Review the ideas generated
Decide - Come to a consensus as a group

Documenting Your Work

- Tab in workbook describing source of data, steps in the analysis, and any other important information
- Color Code your tabs to categorize your worksheets
- Add comments to a cell (right click, insert comment)
- Insert comments in a new separate column

5 Data Analytics Tasks

- Sort
- Filter
- Aggregate
- Transform
- Visualize

Basic Function Syntax

```
=FUNCTION_NAME(parameter1, parameter2,...)
```

For Example

```
=SUM(A5:A8)
```

- This tells Excel to sum all the values in cells A5, A6, A7, and A8

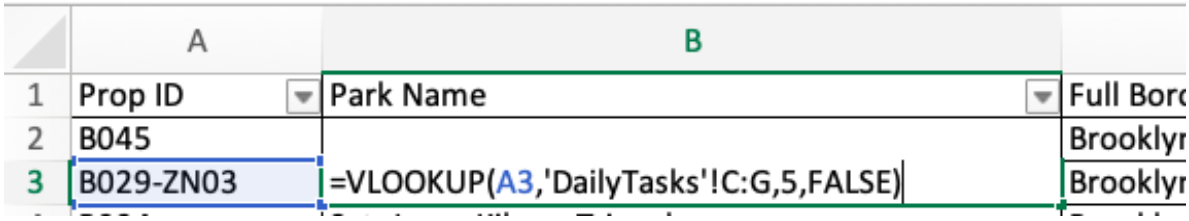
Key Ideas

- Conditional Formulas

- Logical Functions

- Nesting Functions

- Joining Datasets



Visualizing Data

Chart Types - As you prepare your graphics, it is important to choose a chart which best suits your data.

Data Types	Type of Charts
Nominal - Data sorted into categories	Bar Charts
Ordinal - Arbitrary numerical scale	Pie Chart & Bar Chart
Discrete - Represents units	Arrays, Pie Chart & Bar Chart
Continuous - Can be measured on a continuum	Line Chart

Key Elements to Consider When Designing a Visualization:

Type of Chart	
Amount of Data	
Title	
Use of Color	
Data-Ink Ratio	

How do you learn to create good visualizations? ...Make lots of bad visualization.

Do's of visualizations	Don'ts of visualizations

Key Excel Functions

=SUM(): Calculates the sum for a range of numbers
=SUMIF(): Calculates the sum of cells that meet multiple criteria
=COUNT(): Counts the number of cells containing numbers in a range
=COUNTA(): Counts the number of non-blank cells in a range
=COUNTIF(): Counts the number of cells that meet a criteria
=HOUR(): Extracts the hour from a timestamp
=WEEKDAY(): Extracts the day of the week from a timestamp
=CHOOSE(): Uses an index number to return a result from an ordered list of values
=MID(): Select a specified number of characters from a text string
=LEFT(): Select a specified number of characters from the beginning of a text string
=RIGHT(): Select a specified number of characters from the end of a text string
=FIND(): Find the location of a given character in a text string
=CONCATENATE(): Combine characters together into a text string
=VLOOKUP(): An operation to lookup a value in another location based on an index value
=IF(): A function for logical comparison between values to return a desired result given a particular condition

Resources

- **Microsoft Excel keyboard shortcuts** - http://bit.ly/excel-shortcut
- **7 essential Excel tricks every office worker needs to know** - http://bit.ly/excel-7-tasks
- **11 Places That Can Turn You Into A Microsoft Excel Power User** - http://bit.ly/become-excel-power-user
- **Data Sensemaking** - http://fellinlovewithdata.com/teaching/developing-a-data-sensemaking-course
- **Data Visualization Tips and Pitfalls** - https://www.data-to-viz.com/caveats.html
- **Choosing a good chart** - https://extremepresentation.typepad.com/blog/2006/09/choosing_a_good.html
- **Periodic Table of Visualization Methods** - http://www.visual-literacy.org/periodic_table/periodic_table.html#

Contact Us

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Your Notes

Implementation Guide

Concept/Technique	Why It's Important	How I Can Use It
Functions in Excel		
Conditional Formulas		
Logical Functions		
Nesting Functions		
Joining Data		
Considering Key Visualization Elements		
Thinking Intentionally About Types of Charts		