**Session 1.2**

Fundamentally, Data Analytics is about two things:

* Storytelling
* Truth-telling

What are some of the steps in the Analytics Paradigm?

1. Decompose the Ask
2. Identify Data Sources
3. Define Strategy and Metrics
4. Build Data Retrieval Plan
5. Retrieve the Data
6. Assemble and Clean
7. Analyze for Trends
8. Acknowledge Limitations
9. Make the Call or tell the Story

Excel

Functions and (variable or actual) Arguments (also called Parameters)

A range is a variable argument, and Excel will look for the actual arguments in that range.

Nested function – function in a function

.json() = this example of a function followed by parentheses is called a chain function.

*What if we want to* ***combine*** *conditions?*

Use AND, NOT, OR functions

**Session 1.3**

*Committing* changes means saving or publishing the changes.

Won’t be doing any commits to GitLab. Homework submissions to Github.

Exponential growth – compounding

R square: How close individual datapoint is to the dataset. You want this to be as close to 1 as possible.

**Session 2.1**

Break big problem down into smaller projects. Important for coding. Coding is very procedural.

4 fundamental tools of programming:

* Conditionals
* Iterations
* Functions
* Variables/Arrays

Syntax: language

**Variables**: the nouns of code

Two steps in using variables:

* Variable Declaration
* Variable Assignment

Two types of variables:

* Physical variables
* Abstract variables

**Abstraction** is like a counter.

In VBA, items can be **declared** as variables by using **dim**. Then they can be **assigned** a value.

**Arrays** are effectively **groups** of related items.

**Arrays** start with zero. This is not the case in all languages, but it is in VBA.

In VBA, conditionals are declared using the keywords **If, Then, Elseif, Else,** and **End if.** > VBA allows for far more sophisticated conditional logic than Excel formulas.

**Iteration** – using loops to perform group of tasks repeatedly a number of times.

**Functions** are a form of sub-process.

Two types of functions:

* System functions
* User-defined functions

**Session 3.1**

pwd: print working directory

clear: clear all data on screen

rm: remove

rm -r: delete folder and everything in it

rm -rf remove folder forced (override) -if operating system tries to prevent you from deleting)

mkdir: make directory

touch: create file

explorer . (open . in mac): open op folder in explorer (or finder)

conda create -n PythonData python=3.6 anaconda

*create -n: create new virtual environment (VE)*

**Variable in list sequenc**e – special about Python

**in** function is going to do the iteration (ex: if **name** in **group\_one**)

**Session 3.2**

Source activate PythonData – activate Virtual Environment

Absolute path and relative path

Absolute path: unique to your machine

Relative path: unique to the application

**Session 3.3**

Git pull – go to Gitlab folder through Git Bash first (that’s the Master)

**Session 6.1**

Client = application/device that asks for info (web browser, phone, etc.)

Server = what provides the info

API: Application Programming Interface – way for client and server to communicate with each other