

converge24
MASTERCLASS

DRIVEN X MASTERY

CDW Integrated
Tech

BRIDGING R PROGRAMMING WITH EXCEL

THE FUTURE OF DATA MODELING

Michael Charara | CDW | [LinkedIn](#) | [Portfolio](#)

GITHUB REPO FOR EVERYTHING!

<https://github.com/netdevmike/CDW-R-Programming-with-Excel.git>

ABOUT ME



Michael Charara
Program Manager

Education

- Bachelor in Biology with a Minor in Psychology
- Bachelor in Computer Science - Software Engineering
- Masters in Business Administration
- Masters in Information Management Systems

Certifications

- Master's Degree Certificates in Cybersecurity & Data Analytics
- Multi-Cloud Certified Solutions Architect (GCP, AWS, AZURE), CCNA
- HMS Certifications in Physiology, Immunology, Biochemistry, Genetics

Work Experience

- Retail Chain manager- KFC, Pizza Hut, Tim Hortons
- Research Assistant Autosomal Dominant Polycystic Kidney Diseases
- Network Administrator - Focused on Automation
- Cloud Marketplace Program Manager

AGENDA

- **Why R?**
- **Learning Objectives**
- **What is R?**
- **What is R Studio?**
- **Setup**
- **Scripts**

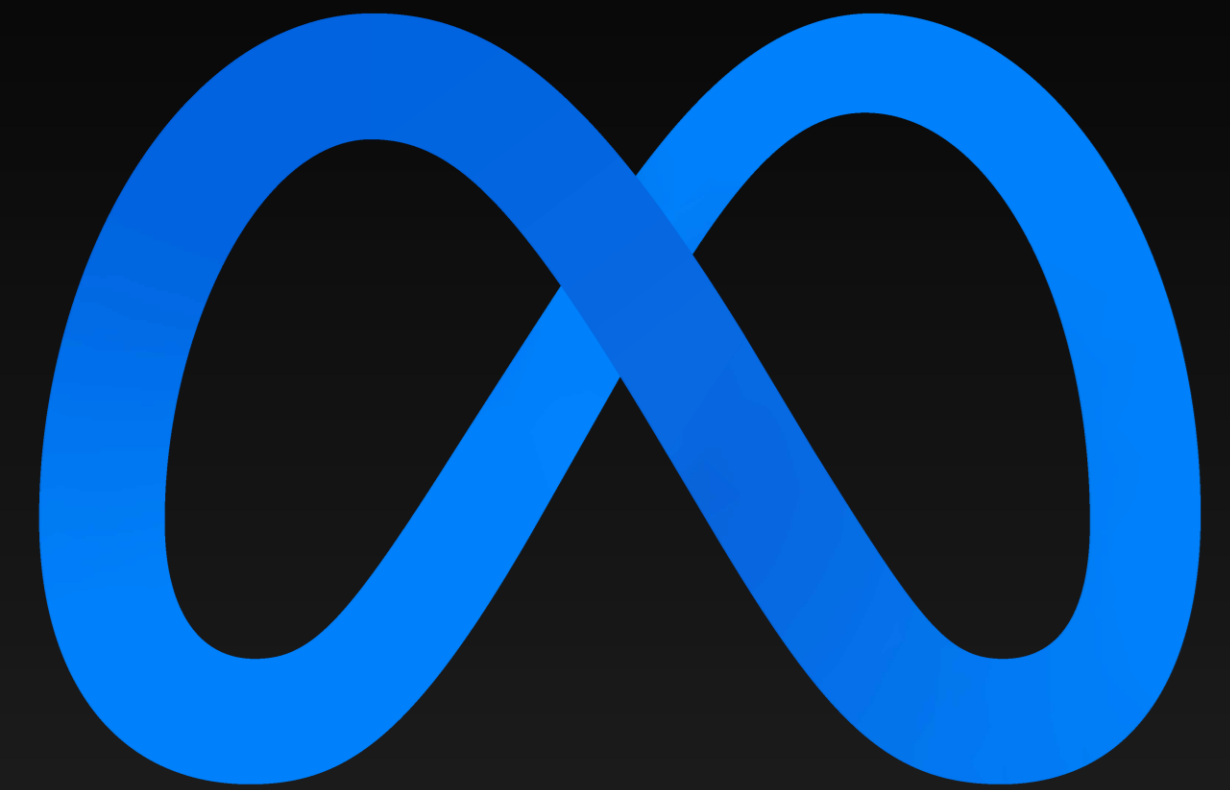


WHY R?

- Functions and Features will take you FAR
- Beginner Friendly
- A few functions = a lot of power
- Advanced libraries to make graphs
- A lot of tutorials online



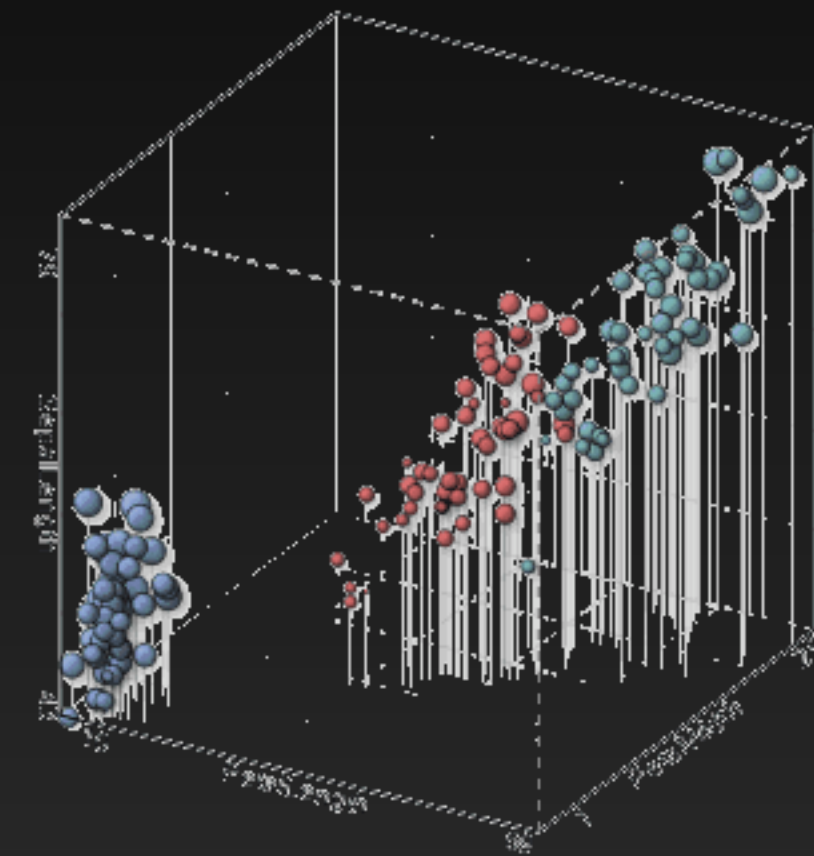
WHO USES R?



- Meta uses advanced tools like R programming for behavior analysis and social media analytics.
- R is used in data management, data analytics, economic forecasting, and business-decision making at Google.
- Amazon data scientists and analysts use R for statistics and machine learning to build analytics systems that can measure the marketing ROI average salaries for Amazon employees.

WHAT IS R?

- R is a programming language for statistical computing and graphics.
- The most popular statistical software in circulation today
 - Source: How Companies Use R to Compete in a Data-Driven World, data-informed.com
- Download R! - <https://cran.r-project.org/>



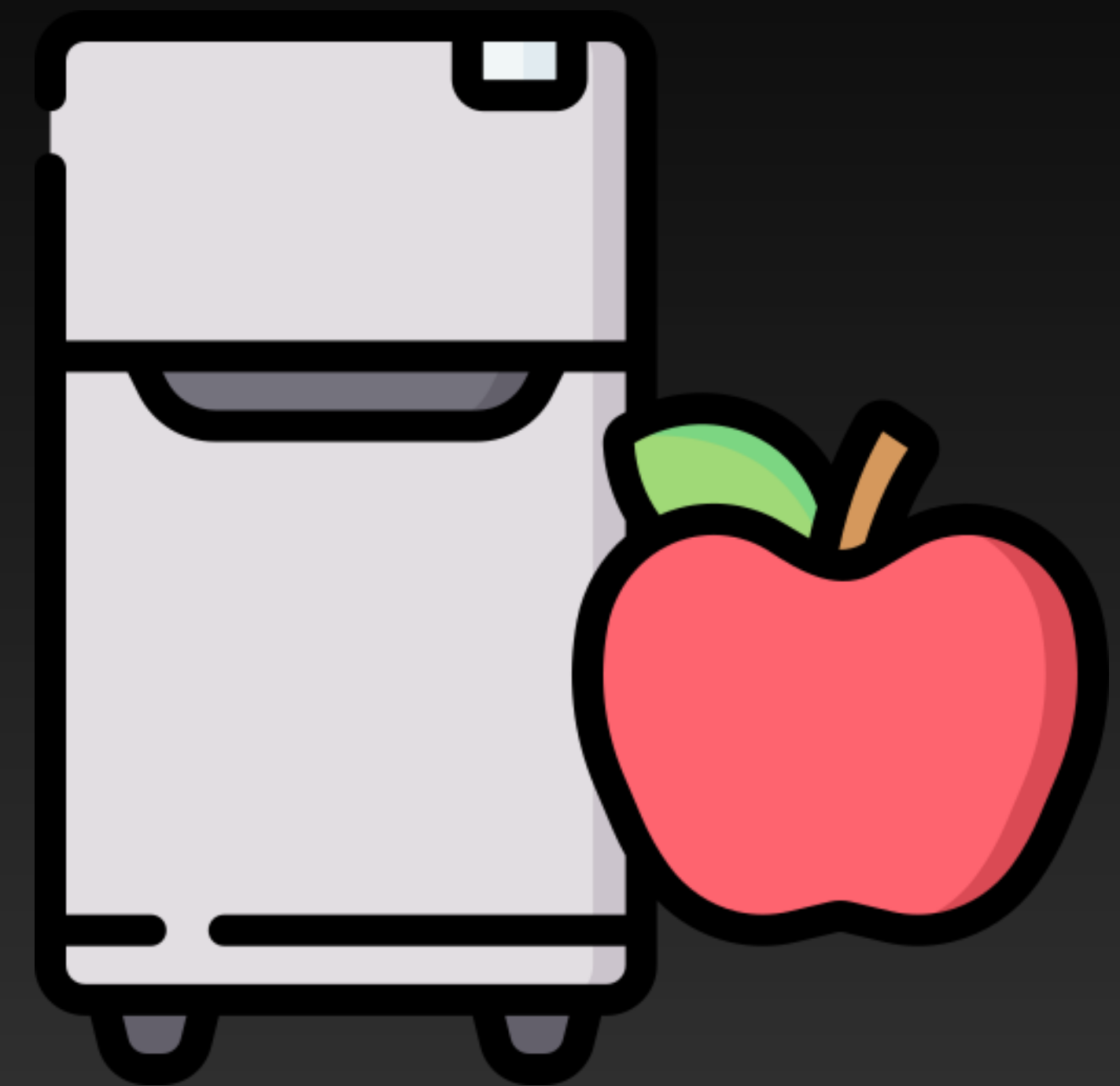
WHAT IS R STUDIO?

- IDE – Integrated Development Environment
 - Adds additional functionality e.g. git, shiny projects, markdown templates
- R studio is the most popular IDE for R
- Not needed to execute R
- R Studio sits atop the installed R version.
- Download R Studio! - <https://posit.co/download/rstudio-desktop/>



R WORKFLOW

- Let's eat an apple for breakfast. Where is the fruit?
- If a “local” file define the path to the file
 - `setwd('fridge/shelf/fruits')`
 - OR
 - From a URL
 - `csvFile <-
'https://raw.githubusercontent.com/netdevmike/CDW-R-
Programming-with-
Excel/main/data/Customer_Data.csv?token=GHSAT0AAAA
AACD2NM5HJUAQUG7JJJ7FN7AKZL2SGNA'`
- The item of interest needs to be in the “working directory”



R USES FUNCTIONS, LIBRARIES AND OBJECTS

- Found the fruit shelf! What tools do I need?
 - `#setwd("fridge/shelf/fruits")`
 - `library(peel)`
 - `library(knife)`
 - `library(readr)`
-
- Change R into a breakfast-preparing machine with specialized libraries.



LETS BUILD OUR TOOLBOX (LIBRARIES)

- Before loading a library use
- `install.packages("name of package")`.
- You only need to do this once per environment
- But, you will need to repeat it w/each new environment!



R USES FUNCTIONS, LIBRARIES AND OBJECTS

- `library(peel)`
- `library(knife)`
- `library(readr)`
- Now R is a cutting & peeling machine, let's pick our fruit.
- `Fridge/shelf/fruits -> apple, banana, pear`
- `setwd('fridge/shelf/fruits')`
- `apple <- readr("Apple.")`
- `peelApple <- peel(apple)`
- `cutApple <- knife(peelApple)`

LETS CODE!