

GVPT Data Science Camp

Introduction and Setup

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August 24, 2026

University of Maryland

Today's Plan

- ▶ Welcome and introductions — getting to know your cohort

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- ▶ What is R, and why do we use it?

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- ▶ Installing R and RStudio
- ▶ A tour of RStudio
- ▶ AI, LLMs, and agentic coding

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- ▶ Please ask questions about anything.

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- ▶ Fun fact: I used to operate a college basketball burner Twitter account

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- ▶ Data exists in structured and unstructured places
- ▶ A PhD in political science is a versatile degree

R and RStudio

What Is R and Why Do We Use It?

- ▶ R is a free, open-source programming language designed for statistical computing, data analysis, and data visualization

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- ▶ R is a free, open-source programming language designed for statistical computing, data analysis, and data visualization
- ▶ Over the past four decades, quantitative research has dominated social science, and R provides us the ability to conduct such research

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- ▶ Locate the file in your downloads folder and double-click it
- ▶ Follow the setup prompts; keep the default settings. Click “Finish” when complete

What is RStudio?

- ▶ RStudio is an **integrated development environment (IDE)** we use to write code

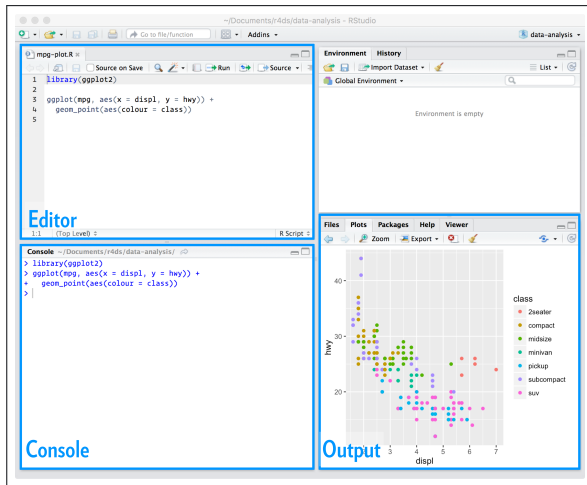
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- ▶ Run the setup:
 - ▷ Windows: open the downloaded `.exe` file and follow the setup prompts
 - ▷ Mac: open the downloaded `.dmg` disk image and drag the RStudio icon into your Applications folder

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 - ▷ Windows: open the downloaded **.exe** file and follow the setup prompts
 - ▷ Mac: open the downloaded **.dmg** disk image and drag the RStudio icon into your Applications folder
- ▶ Click “Finish” or exit the installer once the process is complete

A Tour of RStudio



Source: *R for Data Science* (R4DS)

AI, LLMs, and Agentic Coding

- ▶ AI (Artificial Intelligence) is a branch of computer science that develops systems to do tasks that normally require human intelligence

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- ▶ LLMs (Large Language Models) are a type of AI that are trained on massive datasets to produce human-like text
- ▶ Agentic coding is a software development approach where autonomous AI agents plan, write, and test code with minimal human intervention

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- ▶ Set up R and RStudio

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- ▶ Set up R and RStudio
- ▶ Brief introduction to the exciting world of AI

- ▶ Data Visualization (Tuesday)

Plan for the Rest of the Week

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- ▶ Data Manipulation (Wednesday)

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- ▶ Data Manipulation (Wednesday)
- ▶ Data Presentation (Thursday)
- ▶ Class Presentations (Thursday)
- ▶ Use of AI in Research (Friday)

- ▶ Gill, Jeff. 2021. "Political Science Is a Data Science." *The Journal of Politics* 83(1): 1–7.

Questions?