

Video Title: "Video 1: Introduction"

From "Rhetmap.org: Composing Data for Future Re-Use and Visualization"

by Chris Lindgren and Jim Ridolfo

(Kairos XX.X PraxisWiki)

Welcome to The Missing Tutorial. The basics of reading data, and JavaScript for processing data. In this introductory video, I'm going to walk through the following items. First the exigence. Why is this tutorial important for rhetoricians, and writing scholars? Why is it called the Missing Tutorial? I'll also review the overall purposes, and goals of the series. Then I'm going to review what prior knowledge do I assume you bring to this particular tutorial series. And in that way I hope to offer a means for you to maybe do some prior research, if you don't have those particular set of skills and knowledge's. You can then prepare yourself, and come back to this series of EP. Finally I'm going to review the necessary tools and files that will help facilitate your ability to follow along.

All right, let's get started.

Okay, why are we calling this The Missing Tutorial? Because if you have a desire to start learning how to code with datasets so you can visualize the data, like you can do with the D3.js code library that you see here. Then you'll have no issue finding template visualizations to browse, read and revise for your own needs. However, often is the case where we'll find websites such as this website seen here, and its galleries and tutorials, they'll often find them quite intimidating as a newcomer to programming or data visualization in general.

As someone myself who struggled to understand where to even begin in hindsight have realized that I wish someone would have taught me some fundamentals about the relationships between data sets and its textual modes, and programming languages, which help people write code to manipulate data, and then render desired things such as, well, data visualizations.

So what you see here Data-Driven Documents from the D3 library. You can also just click browse if you'd like their gallery. This is another space where again I feel like it's an intimidation factor here at play. Where do you even begin? How do you even know based on what data you have what kinds of questions you might have of it? And what analysis you've done? What would be the best way to visualize that information? Often it's the case of knowing what questions are connected to what structures of data and the content of that data. So this information is as you can see in the gallery just assumed. In tutorials you'll see lots of tutorials about the D3 library itself which makes sense, but again it's under the assumption that you already have and bring a certain level of programming knowledge about JavaScript in general to the table.

This particular tutorial series does not make that assumption. It's meant to be kind of a introduction to datasets, data structures and formats, and then the JavaScript programming language with D3 more in general. So you cannot come to these websites feeling more confident about maybe how you might even what and where to even begin. Furthermore, what

you may not realize at this point in your adventure learning how to do data visualization much of the visualization work will involve actually a practice called processing, data processing. That is when you have a dataset, you will find that well your dataset isn't actually in the same format as some example, or developing data visualization that you're hoping to take up, in some way that you find on the site, or that you wanna maybe change in some capacity, so this issue of structured information requires that you know how to write code, to process your data that has changed the structure of the information, into numerous other kinds of formats and structures.

So if you don't have that knowledge about different data formats and structures before you even come to the practice of data visualization, you will find that you have more questions that you didn't even know you had. If you attempt to find good tutorials on data cleaning sometimes it's called data cleaning and processing, you will find that this task is currently much more difficult to accomplish as well.

If we look here we have just a simple google search. Data processing in the JavaScript programming language I have learned about a recent website called Learn JS Data, and if we look at it real quickly here, again it's one of those cases if you come to it, and it sort of assumes you already have that basic understanding about certain types of data structures and formats, and then how JavaScript already manipulates those especially with the D3 library. Again these are assumed knowledge that I try to recognize as something that well, not everybody has this knowledge, so let's create especially in rhetoric, so let's create a tutorial series that can help demystify a lot of these things that are really central to any kind of programming practice, even beyond data visualization.

So with that in mind I hope that this, you know drought in fundamentals changes. I hope that more resources like this Learn JS become more of a normal thing to find, but also more normal to find that we shouldn't assume that everybody has this underlying knowledge. So this Missing Tutorial series is meant to fulfill this perceived need. So let's talk about some purposes and goals.

All right, in this tutorial series I will walk you through my uptake over all those market comparison dataset that you see right here on the Rhetmap.org website. You can find this by going to Reports, and clicking on the mark Comparison link. Indeed the guiding question throughout the series is how did I take Rodolfo's data set? This is a Google sheets representation here. This is the actual place where Rodolfo inputs the data manually. How did I take that Google sheets data, and then turn it into this multi-line temporal chart with the D3 code library? How did I get it in the data from this state to another to then be able to visualize it in a temporal chart?

Overall this tutorial series will provide you with the groundwork about how to do this. Specifically the purpose and goals are how to one. Read common data formats and structures. This is a really important aspect of any kind of working with data regardless of programming or not, but in this case it's central to any kind of programming practice to then be able to even visualize the information. Which goes into the goal number two. How to read JavaScript code,

and some of the languages basic data structures. Then finally number three. Understand the links between data, and its textual modes and its potential visual modes. That's another conceptual outcome of this particular Missing Tutorial. I think that's often the missing link that's not covered, and assumed by many of the tutorials out there.

So what I'm hoping to do is show you how actually data structures and their formats are really intervolving with the visual modes, and I think it's important that, if you can start to see those connections, and links between textual mode and visual mode, you can then ask better questions about. Okay, I have my data in this structure how can I make sure that I get it to this structure, so I can then render it as a certain kind of chart? So that's the goals and outcomes of this particular series.

Overall this tutorial will not provide you with a mastery of coding, skills with JavaScript, or with the D3 code library. However, it will provide you the grounds for reading data sets and structures, which are your central for any kind of coding practice. So in this case I will be walking you through a substantive case of the market comparison data, so you can see how I went from again the Google sheets data to the rendered temporal chart.

All right, let's continue, and look over the synopsis of the other videos before we begin actually looking at the data itself. I wanna provide just a quick synopsis of the two other videos in this missing tutorial.

Video number two. Understanding data such as texts. Is meant to help novices come to and understand the common types of data and data formats, structures that you'll encounter once you start learning how to program more but also even if you end up using more tool based environments like tableau for data visualization, you still need to have an underlying sense about what are data sets, how do they actually have textual modes that facilitate analysis work, and how are those textual modes connected to some of the visual modes that they have the capacity to create. That's what video number two is about. Acquainting ourselves acclimating to certain kinds of data structures and formats so that we can then compare those structures to also the way they're represented visually. It's not meant to be comprehensive, it's more acclimation.

Video number three is same. Principles apply with the idea of acclamation. This whole tutorial series is meant to be more of a you've never done any of this before whether it's data vis or any kind of programming. So video number three is about the basics of reading JavaScript to help us then and read RhetMap's data processing code. It's not gonna cover everything inside the data processing code or the code in and of itself that our review it's meant more about how can you at least start to learn how to read JavaScript, and read the data as its represented throughout the code because again that's what code is. With any kind of programming language that we have today, it's how do we figure and reconfigure, write, and revise, reorganize and write programmatically at scale these highly structured texts that we call data.

So again the goal this whole series the Missing Tutorial is to use these other two videos to acclimate to data how its structured and then also see how we can start to learn how to read a programming language specifically JavaScript in relationship to this case of the Rhetmap code.

Okay, let's move forward.

All right, in this tutorial I assume that you have a basic familiarity with web design more generally, so you should already know how to navigate, and read an HTML website project that you see here on the right-hand side of the screen. I assume that you also know about code editors, and what code or GitHub is, since those are common tools used in that domain that also connect with other forms of computer programs. So here's place GitHub.com, it's also where at the repository for the code for the Rhetmap to both chart leads.

To follow along in this tutorial, you should have the following tools, and windows open and ready. First if you want to know where the code again lives for this chart here it is on the GitHub website. You can download it there if you'd like to put it on your computer. So again it's under GitHub.com. My username lingering code, and their specific repository name is Rhetmap time series. If you want to view this code more meaningfully. Meaning on your computer again I assume you kind of have these tools, but you will need a code editor, so if that's something that you wanna look into, and come back to this tutorial series, I really recommend Adams free open source version that works with GitHub really well. It's for both Mac and Windows.

If you are a Mac user and you want to try something else there's something called Bare Bones Edit, BBEdit 12. This is again another free open-source version. It also has what we call syntax highlighting. That's why you see over here in the code editor these particular pieces of the code. If you do HTML and CSS work you know that editors like this are programs that differentiates different aspects of the code. Again those are things that I'll walk you through when we actually look at this code in one of the videos. If you're on a Windows machine you maybe know about Notepad-plus-plus. It's similar to BBEdit in kind of its simplicity, so it really depends on what you want. Again I kinda recommend Adams, since that's what I'm using as well in this video.

However, if you choose not to go down this road, or you've already have all this information, and you don't wish to even download the code from GitHub, you need not do this if you don't want to add another step in the process. I have designed this tutorial to only require actually a web browser. So if I travel this tab over here in Chrome, you'll notice that I'm not actually at Rodolfo's Rhetmap site, I'm at a hosted site through GitHub. So if you go back to the GitHub repository, you can click on this link here, and that will open up the page I'm looking at right now, which is what we will be using in this tutorial. So if you decide not to look at the code at all, and a code editor downloaded et cetera, you did not do that you only need a web browser opens this website in particular it has everything you need here, which I will review when we get there.

Again I'll be using Google Chrome. The Firefox will be quite comparable will be used, and specifically the element inspector. So if again you've done web design, you probably know about this, and I assume that you know about the inspector. So if you right-click on a web page, you'll see a little button in Chrome or in Firefox, they'll say inspect or some kind in Firefox as well, and that will open up a side panel that will show you actually, they'll have HTML, CSS styles, but then also what's called the console, and this is where I've written the code in a way again that doesn't assume you know exactly what each bit of the code does, so I've actually written out what are called logs, and the code so that I can walk you through specifically bit by bit toggling between browser window, and again the code editor window that you see here. Which is why again you did not download the code editor and code. If you choose not to you can just follow along here. I do recommend obviously having this window open to the web page with the data visualization so you can then inspect the element, and follow along with me here. That's the survey of the tutorial.

Let's begin with video two, how to understand datasets as texts, and coding as writing with data.