**Five Essential Presenting Tips for Data Professionals**

**Learn how to tailor your words to the situation**

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**Why Good Presentations Matter**

People in data roles (data scientists, data engineers, data analysis, etc.) often have to present their work to various audiences:

* You might be working for a consulting company and are asked to brief the customer on your findings for a project. Your customer has strong domain knowledge, but might be **lacking in basic data literacy**.
* You might be working for a traditional company where you have recently implemented a machine learning solution to help automate a central process in the company. Great work! The higher-ups have asked you to give an internal seminar on your work. The audience will include highly technical software developers, but also people from radically different departments that **might not understand the technical details** of your work.
* You might be working in a data & analytics team and have recently made a cool contribution. You are asked to give a casual presentation to your other team members about your findings. You can expect that all the attendees of your presentation have a **high data literacy**.

In all of these cases, it is essential to create a good and well-tailored presentation that is engaging and informative. Why? Here are three reasons:

**Outward Appearance:** This one is pretty straightforward. Your presentation becomes the outward appearance of what you have done. If your presentation is poor then this reflects poorly on you. You don’t want customers, colleagues, or higher-ups to think that you struggle with communicating simple ideas.

**Good Presentations Build Your Reputation:** Let’s be honest. You have to be pretty awful to get a reputation for being a bad presenter. On the contrary, you don’t have to be an amazing natural presenter at all to get a reputation for being a good presenter. All you need is to mindfully spend time improving your presenting skills. When people notice that your presentations are engaging and insightful, you will build a positive reputation. This can lead to more opportunities and is rightfully seen as a very positive trait for data professionals.

**Create a Data-Driven Culture:** By creating high-quality data presentations you are improving data literacy. After once sitting through a great presentation on IoT devices, I came out of it knowing more about time series in general. By relating the presentation to what the audience already knows, you can advance their knowledge of the general subject matter. This attention to quality in presentations is often contagious!

In this article, I will give you five essential tips for presenting your data insights to others. There are plenty of more [general presenting tips](https://www.indeed.com/career-advice/career-development/tips-for-giving-a-great-presentation) out there, so I will focus on tips tailored to data professionals. No “stand up straight” or “prepare well” generalities here 😅

**Tip 1 — Understand Your Audience**

The first tip is probably the most regurgitated tip. You have probably heard this tip many times. The problem is that the tip is correct 😒

If your presentation is not tailored to the knowledge of the audience, then even the best presentation in the world will fall flat.

As an example, I have given several talks on research-level mathematics when I was a PhD student. This is very appropriate for an audience of professional mathematicians. However, I can only imagine how things would have gone if I presented details of my mathematical research to a customer. This would be the stuff of nightmares, for both of us.

Before even beginning to draft your presentation, I would suggest that you find answers to the following questions:

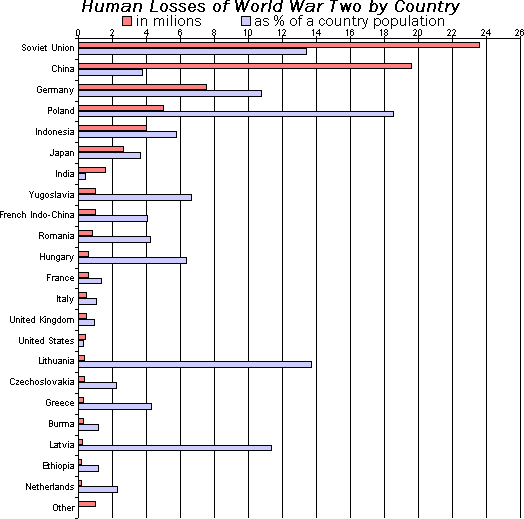
* **Who will attend my presentation?** Try to get a rough idea of the audience. If the domain knowledge of your audience is high, then you can avoid over-explaining what everyone already knows. If the domain knowledge is low, then skipping over central terms can single-handedly ruin your presentation.
* **What level of data literacy does the audience have?** If possible,try to reach out to someone that is representative of the audience and ask them about their data literacy. This is super important! If your audience has little data literacy, then don’t talk about advanced statistical distributions or technical jargon from MLOps.
* **What aspect is the audience interested in hearing about?** Try to understand what the audience is interested in. Even though you are presenting to a higher-up that has high data literacy, she might be more interested in the results. Conversely, if you are giving a presentation to team members of a data & analytics team, then they are interested in the technical details. They might want to implement something similar themselves.
* **What is the formality level of the presentation setting?** Is the presentation at an informal meeting between team members? Then it might be appropriate to use internal jokes and to have a relaxing atmosphere. Say you are briefing a client about the end result of a six-month project. Then you should probably save your carefully crafted meme about neural networks for another time.
* **What is the mental state of the audience?** Is your presentation after a full day of other presentations at a conference? Then your audience will be completely exhausted. Then it might be a good idea to make your presentation slightly less technical and more conceptual if possible. If your presentation is really long, then the mental state of your audience will also suffer. Make sure to include breaks and summarize the main points from time to time.

**Tip 2 — Use Visuals Religiously**

To avoid presentations that are a bundle of numbers and technical terms you need to tell a compelling story. The key to any good presentation is to immerse your listener as much as possible. That is easily said. But how? In general, you should use **loads of visuals**.

One of the surest ways of losing the focus of the audience is to present technical details without visuals. Visuals are a great way to get a complicated point across. They are also pretty to look at. Here are three situations where using visuals improves your presentation:

* **Always use charts to represent trends**. Rather than talking about what happened in the third quarter of 2019 vs. 2020, why don’t you show the difference? A bar chart would be a great way to represent this. For more continuous data (like sales per day), you can use a histogram.
* **Use charts for quantities divided into groups.** If you have several groups (say departments in a company), then you can use a vertical bar chart to represent the quantities (say sales of each department). As an example to see how effective vertical bar charts can be, consider the following graph showing the human losses in WW2:



Public domain: <https://commons.wikimedia.org/wiki/File:Human_losses_of_world_war_two_by_country.png>

Could you imagine how many sentences I would have to write to capture the above picture?

* **Use flow charts to illustrate how parts connect together.** There is nothing quite like hearing someone talk about how 15 software tools fit together without a flow chart. Even the presenter looks confused. Please do everyone a favour and use a flow chart. Flow charts are great for depicting any kind of process. The most obvious example for data professionals is depicting pipelines or cloud infrastructure 🤓

**Tip 3 — Avoid Jargon and Keep it Simple Silly**

Data professionals have a tendency to love technical jargon. When discussing with peers, having a technical vocabulary is super useful. It allows you to communicate complex ideas quickly. How’s that [*REST API*](https://restfulapi.net/) going? Have you finished the [*drift analysis*](https://towardsdatascience.com/model-drift-in-machine-learning-models-8f7e7413b563) of the machine learning model? See? Super useful!

However, this comes back to bite us when we give presentations. It is so tempting to use technical jargon because it is familiar. However, as a general advice, you should try to avoid this as much as possible.

Other professions are well aware that their technical jargon is confusing. Has your dentist ever told you that they need to do an *apicoectomy*?Maybe the plumber that came to your house last week said there was a problem with your *escutcheon*? Every occupation has technical terms. Professions know when to use them, and **when to simplify them**.

When your presentation has an audience that is not so technical or data literate, then try to trim down the jargon. For code quality, there is the well-known maxim [*Keep it simple silly*](https://www.codingzeal.com/posts/keep-it-simple-silly-software-engineers) (KISS). This encourages software developers to try to keep their code as straightforward as possible. Try the same with presentations. Keep them as simple as possible (jargon-wise) and the audience will thank you for it.

**Tip 4 — Relate Your Work to the Bigger Picture**

Have you ever found yourself in someone else’s presentation and taught: “This is all well and good, but why should I care?”. This is completely normal. When we don’t see any connection between what is being said and what we care about, it is easy to tune out.

So when you are presenting, try to relate your work to **the bigger picture**. What effect will the work have on the members of the audience? Here are two examples:

* If you are presenting to a client as a representative of a consulting company, then relate your work to the organization as a whole. How will the things you have done help the organization? Will your work have an impact on other departments in the organization? Every piece of data you present should tell a story about the client’s organization. *Hence you should prepare yourself by getting familiar with the client’s organization*.
* If you are giving an internal team presentation, then how does your work relate to the other team members? Are they perhaps working on similar things? You should ask them beforehand what they have been working on. By doing this, you can make the presentation more interesting by connecting the dots between your work and their work.

The major obstacle to relating your work to the bigger picture is **not** **knowing the bigger picture**. Make an effort to try to understand the audience's needs and wants. In this way, you will automatically make more engaging presentations 🔥

**Tip 5 — Have a Memorable Bottom Line**

The final tip is something that is very often lacking when data professionals give presentations. There is this tendency to try to explain every single detail of a project. This opens up the possibility for a very serious problem: Your presentation might not have a **memorable bottom line**.

Most great presentations have a bottom line that is emphasized, often implicitly, several times during the talk. The bottom line sticks with the audience for longer than any specific detail of the presentation. Examples of this can be:

* **Presentation to a consultancy customer:** *Your membership rates are down 11% this year. The major reason is the lack of engagement. No worries! You fix this in the most cost-effective way by setting up a succinct monthly newsletter.*
* **Presentation to higher-ups in your company:** *I’ve implemented a model that tracks our IoT temperature devices. I estimate that it can reduce the heating energy cost by 8% for all our buildings. That is 50.000$ saved this year alone! We should investigate this further.*
* **Presentation to data literate team members:** *Anomaly detection of time series is super hard when you have seasonal changes in the data. Some tools for trying to deal with this are …*

Imagine that, in the second example above, I instead spent all the presentation talking about time-series analysis of IoT devices and MLOps architecture. This is not what the higher-ups care about. There is then a good chance that they will walk out of the room completely unsure about what the point was. A great presentation will make it **painfully obvious** what the bottom line is.

Are you unsure if you have a memorable bottom line for a presentation you are preparing? Try the **elevator pitch test.** Can you explain, in the time span of an elevator ride (say 30 seconds), what the bottom line is? If not, then it might be a good idea to refine your presentation a bit so that it can revolve around a memorable bottom line.

**Wrapping Up**

You should now be better equipped to present data insights to a wide range of audiences. If you have a tip of your own, then let me know!

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* [Visualizing Missing Values in Python is Shockingly Easy](https://towardsdatascience.com/visualizing-missing-values-in-python-is-shockingly-easy-56ed5bc2e7ea)
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