

Seminar Natural Language Processing (NLP) — Part 5

Basics of Oral Presentation

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Two key messages upfront

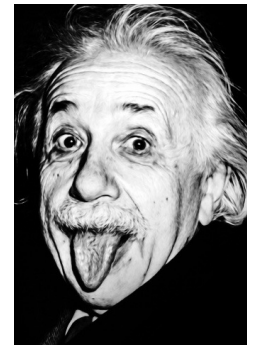
- **Scientific presentation is storytelling**
 - Tell a coherent story with a central theme
 - But: Avoid irrelevant information, stay on topic
 - Plan what points to make and how to get there
 - Don't be complete, be selective
 - Make it exciting, show importance
 - Avoid surprise: Clarify why you tell something
- **Science needs to be understood**
 - Think about what your audience needs to know
 - Adjust complexity to audience
 - Leave out formal things, unless needed
 - Be precise and clear
 - Introduce terms, use consistently
 - Figures and examples help

”Sometimes **reality** is too complex.



Jean-Luc Godard

Stories give it a form.“



Albert Einstein

”Everything should be as **simple** as possible, but **not simpler.**“

Outline

- **Basic slide elements**
- **Content, structure, and style**
- **Talking and timing**
- **Plagiarism and use of generative AI**

best results for each ranking approach

#	Dimension	τ	best	worst
1	PageRank	0.28	15	3
2	Number	0.19	6	1
3	Sentiment	0.12	12	4
4	Frequency	0.10	11	9
5	Similarity	0.02	9	10
6	Random	0.00	8	7

Motivation

Milad, what is an explanation?

Explainer: It's giving details to make clear why some fact holds, how to perform some action, or similar.

Explainer: Oh, I actually meant in the context of explainable AI.

Explainer: I see. Well, an explanation in XAI may, for example, reason why some classification decision was made.

Classification... uhh... what's that again?

- **Explaining**
 - Pervasive communicative process, aimed at explainee's understanding
 - Depends on the explainee's prior knowledge
 - Explainer needs to react and adjust to explainee's responses
 - So far, nearly all XAI research in NLP sees explanations as monological

A Dialogue Corpus for Learning to Construct Explanations, Henning Wachsmuth



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<https://commons.wikimedia.org>

Basic slide elements

Text

▪ Fonts

- Sans-serif fonts (Arial, Verdana, ...) much more readable on slides
Ambiguity speaks against Arial ("Ill") ... but Arial available on all machines
- *Serif* fonts (Times, Garamond, ...) are made for printing
I use them on slides for example texts only
- Prefer simple fonts
- Don't use too narrow fonts just to save space

▪ Font size

- This text is written in 26 pt — for titles and stressing
- This text is written in 24 pt
- This text is written in 21 pt
- This text is written in 18 pt — minimum for text that should be read
- This text is written in 16 pt
- This text is written in 14 pt
- This text is written in 12 pt — minimum for extra information that may be skipped
- This text is written in 10 pt
- This text is written in 8 pt
- This text is written in 6 pt — maybe for texts that should on purpose not be readable

Figures

▪ Figures

- Charts, diagrams, graphs, pictures, drawings, ...
- Slides are visual
- **Rule of thumb.** (Almost) No slide without figure

▪ What to use figures for

- **Primary.** Replace text; visually explain concepts, ...
- **Secondary.** Support your message with pictures
As often done in this presentation

▪ Formatting

- Vector graphics whenever possible
- Others: Optimize sharpness, scale down smartly
Avoid scaling > 100%; 50% is better than 53% — why?
- **Never squeeze or stretch the aspect ratio**
If needed, cut off parts of figures instead
- Check readability of text in figures

”a **picture** is worth
a **1000 words** “



”**unsharpness**
is the mistake that even
lay persons see“

Herbert Kania

Tables and matrices

■ Tables for what?

- Presenting numerical results
- Comparing ideas, approaches, or similar
- Listing attribute values of multiple instances
... and similar

best results for each ranking approach

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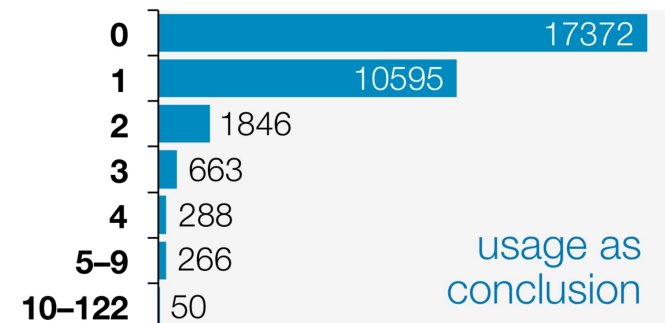
■ Table style

- **Amount.** Show only important rows and columns, to keep a table easy to digest
In articles, comprehensiveness may be preferred
- **Alignment.** Text left, numbers right
- **Lines.** Recommended to use only horizontal lines
Except for matrices

	true	false
true	TP	FP
false	FN	TN

■ Tables vs. charts

- Prefer tables if exact numbers are important
- Prefer charts if differences should be stressed



Colors

▪ Colors in general

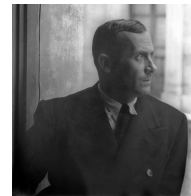
- Presentations are visual, make use of colors
- Fewer colors create a more clear style
- But natural colors have an appeal, too



▪ Font colors for important points

- Use colors consistently
- **Not too colorful**
- **I use dark blue here for highlighting**

And a cyan-like color for quotes



Joan Miro

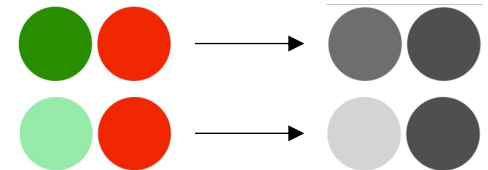
”I try to **apply colors like words** that shape poems, like notes that shape music.“

▪ Support your messages

- Use the same color for the same concept
- Can create connections even across slides

▪ Color vs. brightness

- Think of color blind people — contrast helps



Content, structure, and style

Slide content

■ What to present

- Give sufficient room to motivation and problem
- Clarify research questions and hypotheses
- Put focus on the main ideas and results
- Leave out aspects secondary to your story
- Be sure to clarify your main findings/messages

■ When to present what

- In general, similar to a research paper
- Clarify the central terms of your talk early
- Possibly, state contributions before the details
- Your story governs the exact ordering

■ Title as an anchor

- Your paper/talk title (ideally) shows the central terms
- Starting from these can help the audience follow

Motivation

Milad, what is an explanation?

This paper

- A dialogue corpus for learning to explain

Experiments (detailed results in the paper)

- Experimental setup

Takeaways

- **Explaining**
 - Pervasive communicative process, aimed at understanding
 - Strongly dependent on the explainer and explainee involved
 - Dialogical explanations barely studied so far in NLP
- **This paper**
 - A dialogue corpus for learning how humans explain
 - Insights into explanations for different proficiency levels
 - Baselines for classifying topics, acts, and moves of turns
- **Discussion**
 - Groundwork for learning to construct explanations
 - Needed for XAI that interacts with different users
 - Future work should increase scale and heterogeneity

A Dialogue Corpus for Learning to Construct Explanations, Henning Wachsmuth

"Mama Always Had a Way of Explaining Things So I Could Understand":
A Dialogue Corpus for Learning to Construct Explanations

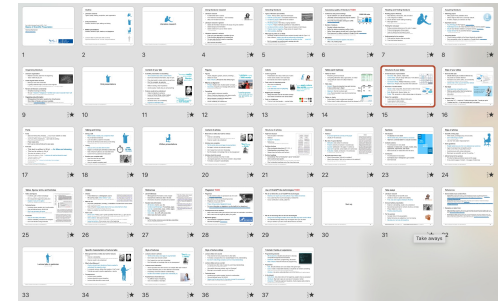
Henning Wachsmuth, Milad Alshomary
COLING 2022

PADERBORN UNIVERSITY Leibniz Universität Hannover

Slide structure

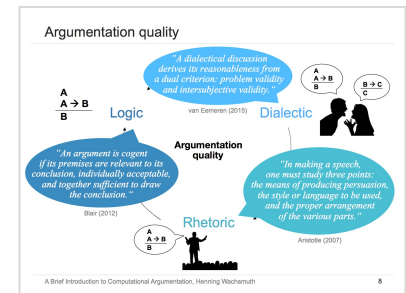
■ Overall structure of presentation

- **Title slide.** Title, authors, maybe date
- **Outline slides.** Only for longer talks (min. ~20 minutes)
- **Content slides.** Your story
- **Conclusion slide(s).** Always! Takeaways, outlook
- **References.** Prepare, but only show when asked for



■ Structure of content slides

- **Header.** Clear unique title, should match content of body
Interesting observation: Titles often not read by the audience
- **Body.** Bullet points, figures, tables, etc.
- **Footer.** Title, presenter, page number/progress, no date



■ Space for separation

- Leave space between different slide parts
- Leave space to slide borders
Harder to read there + border sometimes clipped

Slide style

■ General slide style

- Decide what to put on slide and what to say
- Vary slides to maintain attention
- Animations only when useful, use consistently
Avoid playful ones, unless they match your message
- Clarify what is from you and what from others

Argumentation quality

Logic: $A \rightarrow B$, B

Rhetoric: $A \rightarrow B$, B

Arguments and argumentation

- **Argument**
 - A conclusion (claim) supported by premises (reasons) (Walton et al., 2008)
 - Conveys a stance on a controversial topic (Frederick and Starberg, 2009)
- **Conclusion** *The death penalty should be abolished.*
- **Premise 1** *It legitimizes an irreversible act of violence.*
- **Premise 2** *As long as human justice remains fallible, the risk of executing the innocent can never be eliminated.*
- Often some argument units **implicit** (Houston, 1958)
- Most natural language arguments are **defeasible** (Walton, 2008)
- Arguments follow some **inference scheme** (Walton et al., 2008)
- **Argumentation**
 - Usage of arguments to achieve persuasion, agreement, ...
 - Includes rhetorical and dialectical aspects

■ Text style

- **Avoid grammar and spelling errors**
- Write key points rather than full sentences
- AIA & AUA

Always introduce acronyms & Avoid unnecessary acronyms

■ Amount of text

- Some say 7x7 — maximum 7 bullet points per slide, 7 words per point
- I'd rather say 3x3 — 3 top-level points with 3 sub-points

Grammar.

The difference between knowing your shit and knowing you're shit.



Talking and timing

Talking

- **Do not oversell — but sell**

- Show excitement for your topic
- Make explicitly clear why your topic is important
- Stress the key messages of your talk



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- **Be engaging**

- Look at audience, speak to everybody
- Use oral emphasis, body language, and similar
- Where it makes sense, make your talk interactive



<https://asadiconesienensolucion.com>

- **Speak naturally**

- Match words on slides, but complement them
- No pre-phrased sentences
- Don't be *too* formal, but be serious, avoid slang

Occasional jokes may be nice, if you know how to use them



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Timing

▪ Time implies importance

- The more you say about an aspect, the more emphasis it gets
- Spend most time on the key aspects of your talk
- Don't spend much time on expected or secondary information



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▪ Timing

- Use your time, but stick with time limit
- Expect ≥ 2 minutes per (animated) content slide
- Rule of thumb: Audience can read slide twice



<https://de.wikipedia.org>

▪ Practice your complete talk!

- How much time do you need?
- Does your story work?
- Can you explain everything well?



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Plagiarism and generative AI

Plagiarism

■ Plagiarism

- To sell another's ideas or expressions as one's own

See en.wikipedia.org/wiki/Plagiarism

- On purpose or due to lack of giving sources
- Plagiarism *not* a trivial offense

In many countries considered a crime

- **Proper citing avoids all plagiarism issues**

- For more information on plagiarism, see the leaflet we provide

https://studip.uni-hannover.de/sendfile.php?type=0&file_id=b0b29b98f0010d95c9f75b50ede89acb&file_name=upb-plagiarism-leaflet.pdf



■ Consequences in the seminar

- Major cases lead to failing the seminar (and report to examination office)
- Minor cases may likely still negatively affect your grade

■ My former group...

- Does research on plagiarism detection
- See the tool picapica www.picapica.org



Use of generative AI technologies

- **We do not forbid the use of generative AI technologies**
 - However, we require you to be authors of your slides and articles
 - If you used help from such technologies, you need to indicate this
 - If your contribution is small, you need to justify this

H

Dear ChatGPT, how could I start the motivation of my seminar talk on prompt engineering?

- **We do not generally encourage the use of such technologies**
 - Using generative AI entails various risks that may have harmful effects
 - Our intended learning effects may not happen when you use them
- **We encourage learning a responsible use of such technologies**
 - Useful to *support* writing and illustration tasks
 - Not useful to *take over* such tasks, let alone for other tasks like search
 - Ask your advisor, if you are unsure about if/how to use them

Conclusion

Take aways

▪ Literature research

- Fundamental part of scientific work
- Literature varies in quality and suitability
- **Find, read, and organize literature efficiently**



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▪ Oral and written presentation

- Science is storytelling, needs to be understood
- Several best practices for content, structure, and style
- Proper citation is a must
- **Practice presenting early**



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▪ For the seminar

- Consider hints in this presentation
- Notice that some are subjective, much is missing
- **Develop your own way of presenting**



<https://pixabay.com>

References

▪ Some slides reuse content from:

- **Engels (2010)**. Gregor Engels. Einführung in wissenschaftliches Schreiben und Präsentationstechniken. Presentation within the Seminar "Information-Driven Software Engineering". Paderborn, 2010. https://cs.uni-paderborn.de/fileadmin/informatik/fg/dbis/Lehre/ws10_11/PG_IDSE/Dokumente/2010-04-15_Schreiben_Praesentieren.pdf
- **Becker (2012)**. Steffen Becker. Scientific Working. Presentation within the Seminar "Model Driven Software Engineering with Eclipse". Paderborn, 2010. www.hni.uni-paderborn.de/fileadmin/Fachgruppen/Softwaretechnik/Lehre/Proseminar_Model_Driven_Software_Engineering/ProSem_MDSD_Guidelines.pdf

▪ Examples are taken from:

- **Ajjour et al. (2017)**. Yamen Ajjour, Wei-Fan Chen, Johannes Kiesel, Henning Wachsmuth, and Benno Stein. Unit Segmentation of Argumentative Texts. In Proceedings of the Fourth Workshop on Argument Mining, pages 118–128, 2017. <http://aclweb.org/anthology/W17-5115>
- **Wachsmuth et al. (2017f)**. Henning Wachsmuth, Giovanni Da San Martino, Dora Kiesel, and Benno Stein. The Impact of Modeling Overall Argumentation with Tree Kernels. In Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing, pages 2369–2379, 2017. <http://aclweb.org/anthology/D17-1252>