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Seminar: „Newest Trends in High-Performance Data Analytics

1 Introduction

2 Slide Design

3 Talk

4 Citations

5 Conclusion

Seminar

- The seminar assessment consists of the parts:
 - ▶ Presentation (30-35 min)
 - + 5 min Q&A + 5 min feedback
 - ▶ Report
 - 10-15 pages
- We publish all presentations and reports on our webpage
 - ▶ Please consider and agree
- Please check also [organisational remarks](#)
- A supervisor for formative assessment will be assigned to each topic/student

Schedule

- 3 Weeks **before** presentation
 - ▶ Submission of a structure/rough sketch of the presentation and discussion with the supervisor
- 2 Weeks **before** presentation
 - ▶ Sketch of the slides, feedback of the supervisor
 - ▶ Recommendation: practice the slides to find gaps
- 1 Week **before** presentation
 - ▶ Submission of the presentation slides as PDF (possibly print version)
 - ▶ Recommendation: practice slides for smooth transitions
- **Before** the end of the semester
 - ▶ Submission of the report as PDF to the supervisor

Outline

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Overview

Orientation

- Navigation bar is helpful for the orientation of readers
- Section separators (last slide), helps too

Content

- Rule of thumb: create 4-5 high-level sections
- Easy start/introduction, followed by a deep dive of selected content
 - ▶ Technical content for CS audience expected, it's a seminar
- Include appropriate pictures
- Provide backup slides in the appendix for details

- Tools: LaTeX Beamer (preferred, we can provide a template), may use LibreOffice/Powerpoint/Keynote
- Primarily bullet points
 - ▶ The reason is that long sentences are typically read by a speaker which isn't the purpose of a presentation and even a "reading" lecture. Also attendees are often distracted, reading the text and won't listen to you the whole time. The bullets should help you to remember what you like to say and help listeners to keep track where you are / revisit content.
- Include „Slide Nr/Slide count“ on **every** slide
- Text must be easily readable
 - ▶ No read on black, sufficiently large font
- Don't use weird backgrounds
 - ▶ Prints - white background preserves ink
 - ▶ Readability for the audience (and visually impaired)
 - ▶ Create a print version PDF
- Animations: Don't use them, except if **really illustrative**

Slide Design

- Prevent multiline with fragments at beginning of 2nd line, like this
 - ▶ Either rewrite lines to be single line,
 - ▶ or text on 2nd line to be at least 1/3rd
 - ▶ Much better: create subbullets / new keywords
- Slides should be (mostly) understandable without narration
- Rules of thumb for design of content:
 - ▶ Bullets should be readable from top to bottom
 - ▶ Bullets on one level should have a similar structure
 - ▶ Subbullets should suit the bullet
 - ▶ Bullets should fit to the slide title
 - ▶ Slide title should fit to the section
 - ▶ Less is more

Slide Design: Negative Example

- Processor architecture:
 - ▶ Describes the design and instruction set of a microprocessor
 - ▶ Think about 64 bit vs. 32Bits
 - ▶ follows Moore's law
- More about storage systems
 - ▶ There are various types:
 - ▶ HDD based vs. tape based
 - ▶ SSDs
 - ▶ Based on more characteristics
- Definition: High-Performance Computing
 - ▶ High-Performance Computing (HPC - German: Hochleistungsrechnen) uses supercomputers and computer clusters to solve advanced computation problems. It is part of computer-aided computing and covers application that require high demand of computing or memory.

Slide Design: Improved Version

■ Definition: High-Performance Computing

„[...] uses supercomputers and computer clusters to solve advanced computation problems.“ [Wiki16]

■ Processor architecture

- ▶ Describes the design and instruction set of a microprocessor
 - Available control units
 - Instruction width in bits (e.g. 64 bits)

■ Storage system

Storage systems are systems that can hold data for processing, or archive and backup data“ [IT16] (translated)

- ▶ Media technology
 - ...
- ▶ Architecture
 - ...

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Talk

- Motto: The presentation is for the **attendees!**
- Please speak freely and don't read slides
 - ▶ Yes, they can read, too!
- Stick to the expected presentation time
 - ▶ Optional slides help to ensure you don't be too fast
 - ▶ Check the clock periodically or practice, practice, ...
- Prepare yourself in time
 - ▶ **At least** one test presentation
 - Even for another person (or record yourself)
 - You can also hold it in front of your supervisor

Talk

- Be ready and prepared
 - ▶ Try the presenter (colors, resolution)
 - ▶ Clean blackboard
 - ▶ Check clock, lights (always keep lights on)
- Stay in touch with the attendees
 - ▶ Look at them not the screen
 - ▶ Check your stance - don't put hands into your pockets
- Attend questions confidently
 - ▶ Answer short questions immediately
 - ▶ Postpone long questions/discussions

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- **Purpose:** „Das Zitat muss einen Zweck erfüllen.“ [Zit14]
- **Mark, show unmodified:** „Du musst das Zitat kennzeichnen und darfst den Inhalt nicht verändern.“ [Zit14]
 - ▶ You may include thoughts in [..] boxes
- Cite only what is necessary - (analogous to [Zit14])
 - ▶ Remember: Rewritten content of a citation is still owned by others
- Add sources to the bibliography



Figure: Karl-Theodor zu Guttenberg.
Source: "Christoph Braun" [Wiki11]

Wrapup and Final Slide

Don'ts

- Stay on a weird end slide ("Questions", "The End", "Bibliography")
- Thank people for "listening"

Do's

- Show slide during Q&A as it may inspire more questions
- Optimal slide: Summarize the "Contributions" you made
- Alternative slide: Summarize the talk
 - ▶ Key items people should remember
- Optional: Include your contact details (email)
- Last sentence something like:
 - ▶ "With that I look forward to your questions"
 - ▶ "Now you are empowered to do X - I wish you a nice day"

- Wiki16** "High-performance computing", https://en.wikipedia.org/wiki/High-performance_computing, 2022-04-02
- Zit14** „Quellen korrekt angeben“, <http://www.kreisgymnasium-neuenburg.de/unterricht/itg/quellen-korrekt-angeben>, 2014-04-07
- Wiki11** „Karl-Theodor zu Guttenberg, 2011“, http://de.wikipedia.org/wiki/Karl-Theodor_zu_Guttenberg, 2011-04-07
- IT16** „Speichersystem :: storage system“, <http://www.itwissen.info/definition/lexikon/Speichersystem-storage-system.html>, 2016-04-06