Estudo Orientado em Engenharia Informática 2022/2023

Making presentations

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Summary

- What is a good presentation?
- Presentation tips and pitfalls
  - Presentation organization
  - Making slides
  - Using charts
- Factors for an engaging presentation

Presenting papers at conferences

Understanding Spaghetti Models with Sequence Clustering for ProM

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Abstract. The goal of process mining is to discover process models from event logs. However, for processes that are not well structured and have a lot of diverse behavior, existing process mining techniques generate highly complex models that are often difficult to understand; these are called spaghetti models. One way to try to understand these models is to divide the log into clusters in order to analyze reduced sets of cases. However, the amount of noise and ad-hoc behavior present in real-world logs still poses a problem, as this type of behavior interferes with the clustering and complicates the models of the generated clusters, affecting the discovery of patterns. In this paper we present an approach that aims at overcoming these difficulties by extracting only the useful data and presenting it in an understandable manner. The solution has been implemented in ProM and is divided in two stages: preprocessing and sequence clustering. We illustrate the approach in a case study where it becomes possible to identify behavioral patterns even in the presence of very diverse and confusing behavior.

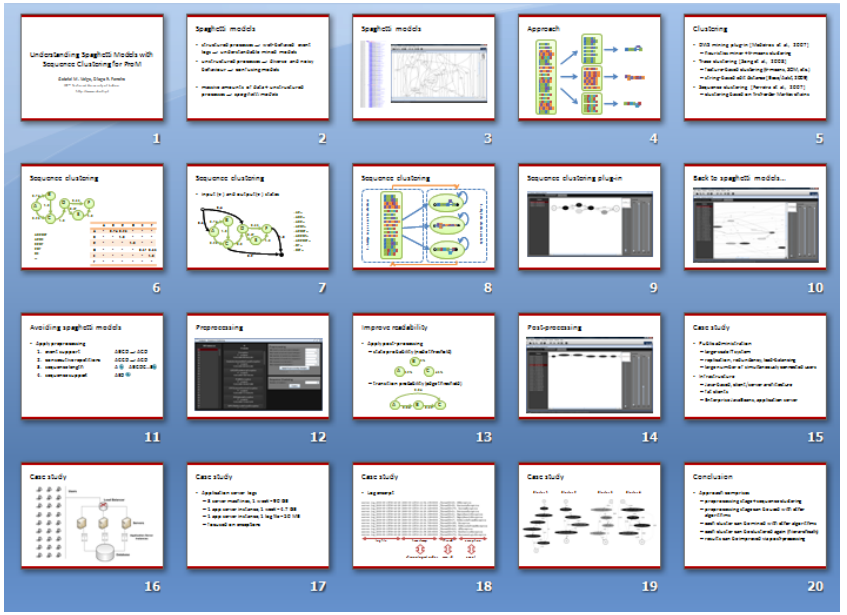
Key words: Process Mining, Preprocessing, Sequence Clustering, ProM, Markov Chains, Event Logs, Hierarchical Clustering, Process Models

1 Introduction

The main application of process mining is the discovery of process models. For processes with a lot of different cases and high diversity of behavior, the models generated tend to be very confusing and difficult to understand. These models are usually called *spaghetti models*. Clustering techniques have been investigated as a means to deal with this complexity by dividing cases into clusters, leading to less confusing models. However, results may still suffer from the presence of certain unusual cases that include noise and ad-hoc behavior, which are common in real-world environments. Usually this type of behavior is not relevant to understand a process and it unnecessarily complicates the discovered models.

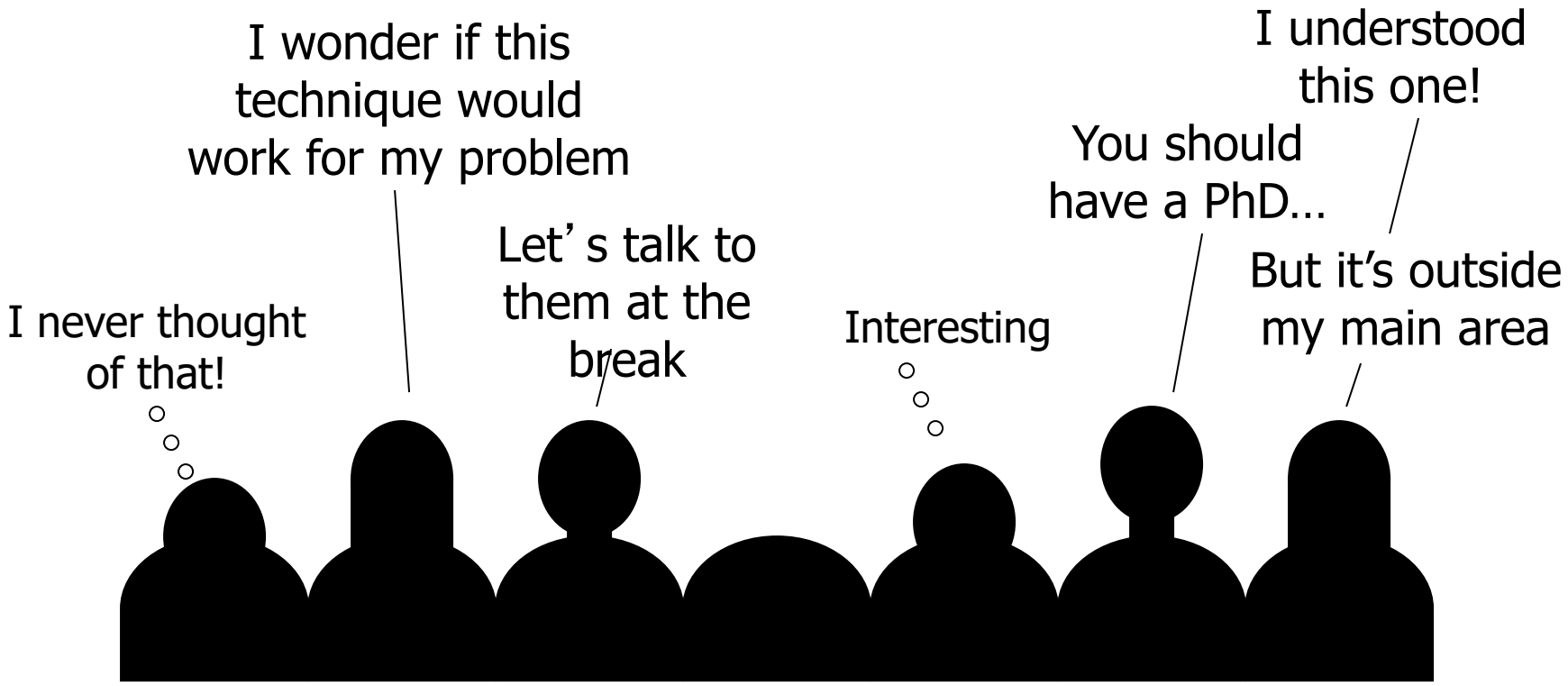
In this paper we present an approach that is able to deal with these problems by means of sequence clustering techniques. This is a kind of model-based clustering that partitions the cases according to the order in which events occurred. For the purpose of this work the model used to represent each cluster is

- **Typical Presentation**
  - 15-20min + 5 min Q&A
  - Point to a max. 20 slides



Good presentations

- Give the audience a sense of what your work is…
- Make them want to read your paper…



General tips for presenting

- Start by determining the main ideas you want to convey
  - **Spoil the punch line, by stating your results early and in simple terms**
- Time is generally short, so you must be efficient
- Research your audience's background and target the presentation to them
- Speak clearly and directly
  - Think of the presentation as a performance
  - Articulate clearly
  - Limit jokes, side comments, "*ums*", and "*ahs*", etc.
  - Look at the audience
- **Rehearse!**

Organize your presentation

- Begin with an outline <- Only in seminars
- **Provide motivation for the topic**
- Summarize your approach
  - Limit Maths! in most talks no one is going to read complex equations
  - Contrast your approach against previous work
    - **Why is your approach needed (it's not necessarily better)**
- Present results
- Discuss results and their implications
- Summarize
- Prepare back-up slides to answer questions

Slides = Visual Aids

- Minimize text
  - Keep less than 8 bullets per page
  - Do not use long sentences
- Keep text legible
  - Using font size larger than 20pt is desirable
  - Dark text on light background or reverse
- **Practical advice** : *Limit animations!*
- Use tables sparingly and keep them simple (*and charts are much better here*)
  - tables can appear in the main document

Never forget

- The presentation reminds the audience of the **most important findings and their implications**…
- Detailed information is on the Main Document (Thesis, Report or Paper)!
- Corollary: Do not put everything in the presentation, only the relevant stuff

Slide layout – the bad example

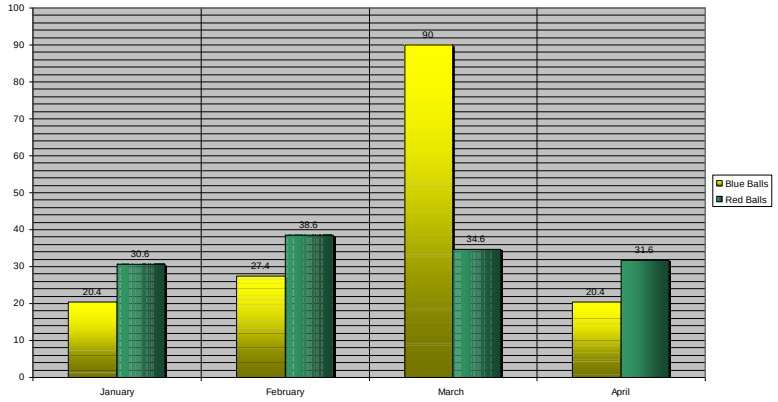
- This page contains too many words for a presentation slide. It is not written in point form, making it difficult both for your audience to read and for you to present each point. Although there are exactly the same number of points on this slide as the next slide, it looks much more complicated. In short, your audience will spend too much time trying to read this paragraph instead of listening to you.

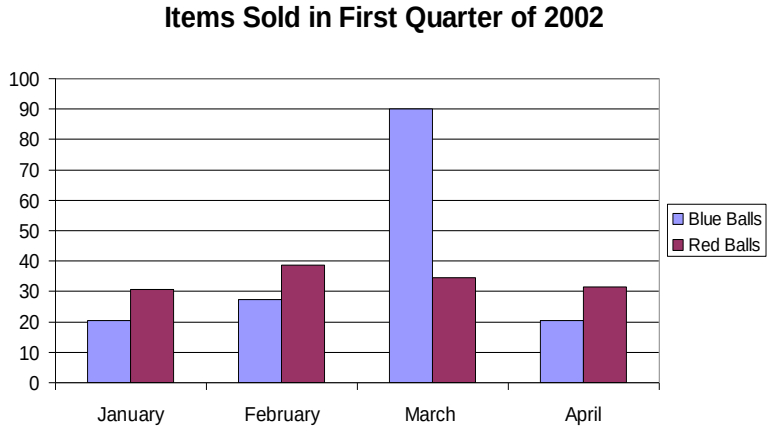
Slide layout – the good example

- Show one point at a time:
  - Will help audience concentrate on what you are saying
  - Will prevent audience from reading ahead
  - Will help you keep your presentation focused
- Slides support, but do not replace, your discussion
- **Do not read directly from the slides or your notes**

Figures and charts

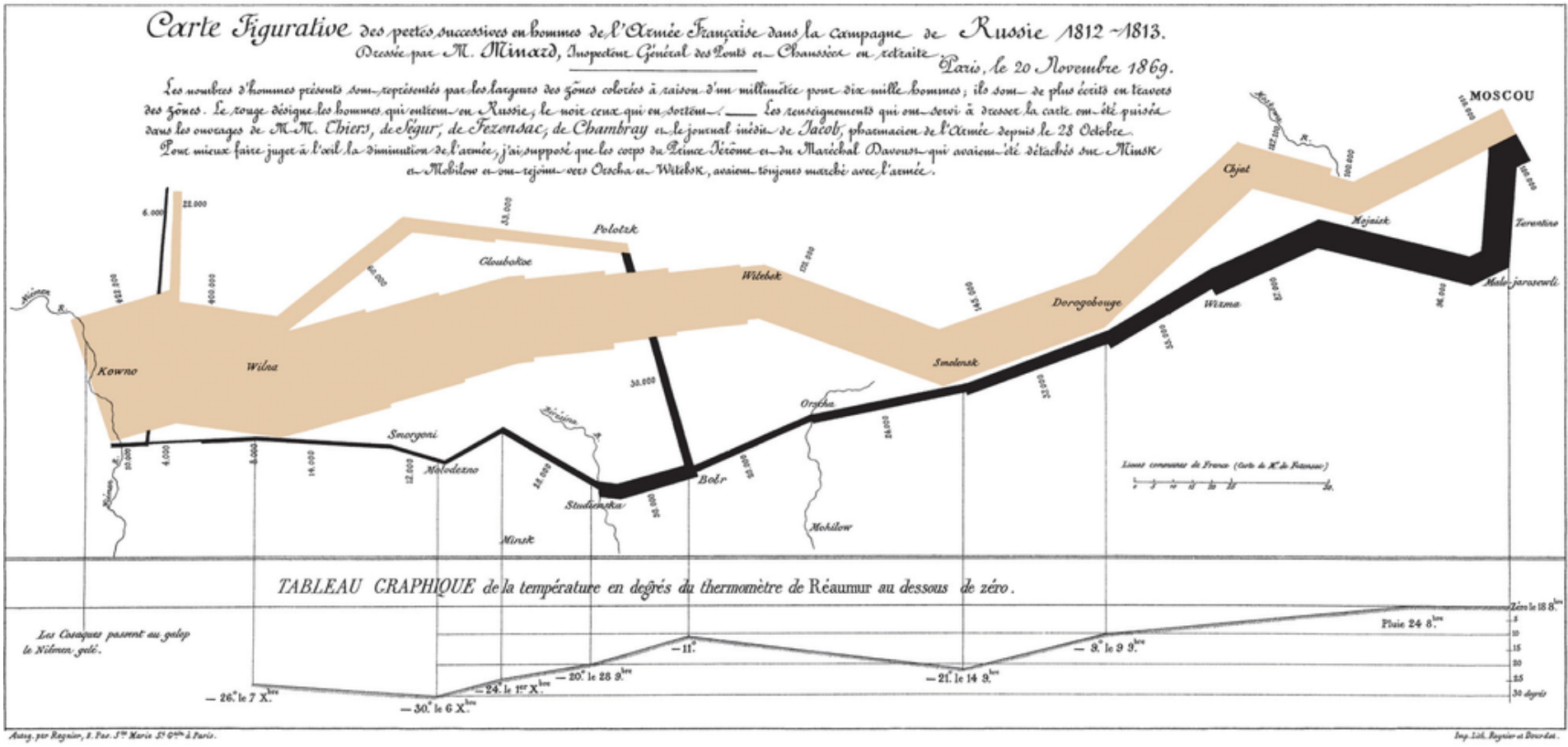
- Some guidelines for figures
  - Simpler is better in presentations
  - Keep text legible
  - Choose strongly contrasting colors
  - Include error/data info
  - Explain your figures
  - Shading is distracting
  - Minor gridlines are unnecessary
  - Don't use 3D in columns or bars
  - Avoid mind numbing Excel charts
- Limit the number of figures





The perfect example

(by Charles Minard)



Time allotted for presentation and questions

Rookie's Notes:

- Allow for approx. 1-1.5 minutes per slide
  - In good, really good presentations this rule-of-thumb can be VASTLY different
- Allocate time in proportion to the topic's importance
- Rehearse at least twice for timing
- Simplify or remove slides, to adjust timing
- Sleep on it!

The most important thing

- **Tell a story and believe in it!**
  - If you do not believe what you are presenting the others also won't
  - Your presentation should be pleasant
  - Show enthusiasm but not sillyness
  - No breaks. Everything should flow like it was the absolute logical consequence of the previous events

Last, but not the least

- Do not even think of presenting something you do not understand
  - It will bite you and EVERYONE will notice
- Invaluable tip: Use the **Feynman Technique**
  1. Learn a concept that you need
  2. Pretend you are explaining it to a young student, in your own words
  3. Identify what you cannot explain well and revise and repeat previous steps until it is perfect
  4. Eventually review and simplify

Questions?