Seminar Algorithmotechnik
Algorithmic Methods in the Humanities

Introduction and Topic Distribution

Prof. Dr. Gregor Betz · Lucas Czech
Michael Hamann · Dr. Tamara Mchedlidze
PD Dr. phil Michael Rupp · Prof. Dr. Alexandros Stamatakis
Dr. Reiner Stotzka · Dr. Danah Tonne

27.4.2017
Overview

1. Organizational issues
   - Structure
   - Your Participation

2. Topics
   - Presentations
   - Distribution
Supervisors

Prof. Dr. Gregor Betz
Institute of Philosophy

PD Dr. phil Michael Rupp
Institute of German Studies

Dr. Reiner Stotzka
Institute of Data Processing and Electronics

Dr. Danah Tonne

Michael Hamann

Dr. Tamara Mchedlidze

Prof. Dr. Alexandros Stamatakis

Lukas Czech

Institute of Theoretical Informatics
Participants

Short presentation:
• Name
• Direction of studies/Semester
• Background in Algorithms and Humanities
Seminar Summary

• **independent work** on a recent research topic
• extraction of the **highlights** of the topic and their **short** presentation
• investigation of the topic and **scientific presentation** of it
• **actively discuss** the topics of the other participants
• present the details of the topics in **your own words** in a written document
• **evaluation** of a scientific text
Seminar Summary

- **independent work** on a recent research topic
- extraction of the **highlights** of the topic and their **short** presentation
- investigation of the topic and **scientific presentation** of it
- **actively discuss** the topics of the other participants
- present the details of the topics in **your own words** in a written document
- **evaluation** of a scientific text

→ Opening of your horizon on the various application of computer science
→ Basic skills of scientific work
→ Preparation for the Master thesis and its presentation
Structure

today: Topic distribution
Structure

today: Topic distribution

Get familiar with the topic
literature review

18.5. Short presentations
Structure

today: Topic distribution

Get familiar with the topic
literature review

Selection/structuring
lecture content,
Creating the slides

18.5. Short presentations
1.6 Presentations
8.6. Presentations
22.6. Presentations
29.6. Presentations
6.7. Presentations
13.7. Presentations
today: Topic distribution

Get familiar with the topic
literature review

18.5. Short presentations
1.6 Presentations
8.6. Presentations
22.6. Presentations
29.6. Presentations
6.7. Presentations
13.7. Presentations
27.7. Submission of the written documents (first round)
Structure

today: Topic distribution

Get familiar with the topic
literature review

Choice of the material
structuring the document, writing

Selection/structuring
lecture content,
Creating the slides

Review of two other documents

18.5. Short presentations
1.6 Presentations
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22.6. Presentations
29.6. Presentations
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13.7. Presentations

27.7. Submission of the written documents (first round)

18.8. Submission of the reviews
Structure

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Get familiar with the topic
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Selection/structuring
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18.5. Short presentations
1.6 Presentations
8.6. Presentations
22.6. Presentations
29.6. Presentations
6.7. Presentations
13.7. Presentations

27.7. Submission of the written documents (first round)

Revision of your own document

18.8. Submission of the reviews

08.09. Final submission of the written document
today: Topic distribution

Get familiar with the topic literature review

Selection/structuring lecture content, Creating the slides

Choice of the material structuring the document, writing

Approximate time 4LP = 120h

Read, do research, understand 40h
Making presentations and practicing 30h
Writing and structuring 30h
Read another work and evaluate 10h
Presentations 10h
Your Participation

• **Short presentation** of the highlights of the topic
• **Main presentation** of the topic
• **Presence** on the presentations and **participation** in the discussions
• **Written document** of the topic, formulated in your own words with concentration on your own questions
• **Review/correction** of two documents of other participants
• Following the deadlines (help to keep the flow of the seminar)
Your Participation

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Grade

• Quality of the **main presentation** (content, structure, presentation skills)
• Quality of the **final written document**
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- **Main presentation** of the topic
- **Presence** on the presentations and **participation** in the discussions
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Grade

- Quality of the **main presentation** (content, structure, presentation skills)
- Quality of the **final written document**

*short presentation and the first version of the document are not graded*
Familiarization phase

1) first look through the paper, and then read thoroughly
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2) Make overview of the related work
   - Which works and results are cited? → Related Work
   - Which of these are fundamental?
   - What is the state of the art of the research area of the paper?
     → Article search Google Scholar or DBLP; Access from the university network
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3) Assess the significance of the paper
   • Who cites this paper?
     → in Google Scholar use the function ”cited by”
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4) What should you read in the literature?
   • Title and Abstract – Is the content relevant?
   • if yes – Introduction, Conclusion, Main results
   • Only if details are relevant – read all
   • Keep notes!
Short Presentation

Idea: Communicate early what you have understood...

Learning Effects:

• Better understanding of the topic
• Early feedback and ideas for possible directions
• Train for the main presentation - feedback from the advisor
Short Presentation

Content

• „Advertisement“ of the main presentation
• **Motivation:** applications in the humanities that use these techniques
• **What results you will concentrate on:** Model, Algorithms and used techniques, evaluation, experimentations . . .

Form

• 5 Minutes
• structured and clear slides:
  examples instead of a lot of text, intuition instead of formal definitions
• Use any software you prefer (**Ipe**, PowerPoint, Keynote)
  *ipe7.sourceforge.net*
Main Presentation

Learning Effects:

• Deepen the understanding by communicating the details of the topic
• Develop presentation slides - multiple feedbacks from the advisors
• Develop your presentation skills
• Get feedback from the audience and improve in the future
Main Presentation

**Timing:** 30 minutes + 15 minutes discussion

**Content:**
- Motivation of the topic
- Details of your topic
Main Presentation

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**Content:**
- Motivation of the topic
- Details of your topic

**Struct.:**
- What can be explained clearly in 30 minutes? Make a selection of the essentials issues. *Talk to your class-mate*
- What is your target group?
- Clear, logical structure, concise but illustrative examples
Main Presentation

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**Slides:**
- bullet points, no complete sentences
- graphics use
- not too many and not too overloaded slides (about 2 min / slide)
- clear design (suitable colors, uniform font, . . . )
Main Presentation

**Timing:** 30 minutes + 15 minutes discussion

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- Motivation of the topic
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**Slides:**
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**Present.:**
- practice, measure time
- eye contact with the audience
- keep the listeners “awakened”, arouse their curiosity
- speak freely, slowly and clearly
- remain calm, control nervousness
Learning Effects:

- Structure and write scientific text
- How to produce formal enough but still readable text: balance between formal definitions and intuition
Written Document

Size: 12–15 in a given \texttt{LATEX}-format
Written Document

Size: 12–15 in a given \LaTeX-format

Structure: • short and clear Abstract
• Introduction, state of art, applications
• Selected topics in detail
• Summary / Conclusion
• complete references (BibTeX)
Writen Document

**Size:** 12–15 in a given \LaTeX-format

**Structure:**
- short and clear Abstract
- Introduction, state of art, applications
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**Writing:**
- Do not copy text: express in your own words
- Logical structure, keep the red line
- Avoid very long sentences
- clear and consistent formulation
- avoid too long paragraphs
- Use pictures
- Cite and specify all sources correctly
- Check grammar and spelling
Mutual Reviews

Learning Effects:

• critical reading of scientific texts, constructive critiques
• deeper understanding of two other seminar topics
• you and your class-mates get meaningful feedback and suggestions for improvement
Mutual Reviews

**Form:**
- written statement (form provided)
- short summary of the content
- strengths and weaknesses of the work
- review of the text (comprehensibility, structure, accuracy, language, topic coverage, ambiguities, . . .)
- be constructive: detailed comments and correction instructions
- as detailed as you would like to get review for your work
- anonymous, objective and fair
Supervision

Your supervisor is your **contact** in all matters, both regarding the content, topics and the preparation presentation. It is **your** responsibility to approach him / her.
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**Informal meeting with the supervisor:**

- ≥ 2 Weeks before the main presentation: discussion of the concepts to present
- ≥ 1 Week before the main presentation: discussion of the slides
- The latest till 27.6 (a month before the write-up submission): to discuss the content of the written document
- The latest till 28.8 (10 days before the final submission): Discussion of the corrected version of the document
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Topic Overview

1) Storyline Visualizations (Tamara)
2) Stemmatology or “Who Copied from Whom?” (Danah)
3) Stylometric Text Analysis with Distance Metrics (Danah)
4) Stilometric analysis of medieval german texts (Danah & Michael R.)
5) Phylogenetic Analysis of Dante’s Monarchia (Alexis)
6) Phylogenies of Natural Languages (Alexis)
7) Measuring Coherence of Statements (Gregor)
8) Multi-Party Conversation (Gregor & Tamara)
9) Automated Topic Classification (Michael H.)
10) Automatic Sentiment Summarization (Michael H. & Lucas)
11) Information Evolution in Social Networks (Lucas)
Next Meetings

now:
  personal communication with your supervisor

18. May 9:45 am:
  Short Presentations

1. June 9:45 am:
  Presentation of two topics

8. June 9:45 am:
  Presentation of two topics

Check web page for the following meetings
Next Meetings

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always in this room

Check web page for the following meetings