

CSE 8331 - Spring 2012

Advanced Topics in Data Mining

<http://michael.hahsler.net/SMU/8331>

Guidelines for preparing and presenting the tutorial

Every student will prepare and present a tutorial. Tutorials are held typically on Mondays. A list with exact times and topics will be published on the course web site.

Definition of Tutorial (Wikipedia): *"A **tutorial** is used to teach material. More interactive and specific than a book or a lecture; a tutorial seeks to teach by example and supply the information to complete a certain task."*

Tasks

1. You need to sign up for a date for your tutorial. We will do this in the **second week**. Note that students who present earlier get a bonus.
2. Each student has to select a topic (some suggestions can be found below) **by January 30**. There is no regular class in this week and I will meet with each student individually to discuss the chosen topic.
3. You need to prepare a 1/2 page abstract for your tutorial which explains the importance of the topic and what is covered in the tutorial. The abstract is **due on the Wed. before your tutorial**.
4. The tutorial should cover one whole session (80 minutes) and give the students an opportunity to appreciate the goals and the special challenges in the chosen area, the key methods (with advantages and disadvantages), applications and a list of key references (5 or more carefully chosen books, conference or journal articles) where the student can read about the topic in detail. The tutorial needs to engage the listeners with questions and, if possible, small exercises. The tutorial should involve a 15 minutes discussion.
5. Email slides (also in pdf format) to me right after your tutorial.

Suggested topics

- Apache Hadoop (MapReduce)
- Dimensionality Reduction
- Ensemble Methods
- Graphical Models (Bayesian Networks)
- Graph Mining
- Privacy-preserving Data Mining
- Recommender Systems
- Support Vector Machines
- Social Network Mining
- Time Series Prediction
- Text Mining

- Web Usage Mining
- Special application areas

Grading

You are graded using the following categories:

- Abstract (10%)
- Difficulty of topic (10%)
- Clear definition of problem area (10%)
- Technical detail (40%)
- Applications (10%)
- References (10%)
- Presentation style and support (10%)
- Time bonus (+10% for the earliest presenter, 9% for the next, and so on)

Distance students

Distance students are required to:

1. Prepare a video presentation (using e.g. CamStudio) which may be played in class. The video is due at noon on the Friday before the tutorial date.
2. Watch each tutorial and write 1 page (12 point font, single-spaced) summary. This summary needs to identify strong and weak points in the tutorial.