

# Data Analytics Seminar 1

## Anomaly Detection

ISMILL

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# Seminar - Anomaly Detection

## Introduction

- ▶ Anomaly Detection
  - ▶ The identification of rare items, events or observations
  - ▶ Suspicions, significantly different from the majority of the data.
  - ▶ Connected to some problems or rare event: bank fraud, medical problems, structural defects etc.
  - ▶ 2 types of problems:
    - ▶ Unsupervised Learning: no labels are provided.
    - ▶ Semi-supervised Learning: some normal or anomalous examples can be labeled, in addition to a large set of unlabeled data.
- ▶ When ? Tuesday 14:00 - 16:00
- ▶ Where ? B 026 (Samelsonplatz)
- ▶ LearnWeb : WiSe 2019/20: 3111 Data Analytics

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## Seminar Tasks and Activities :

- ▶ One paper and a presentation day are assigned per-person
  - ▶ The presentation final version must be submitted to Learn-Web one week in advance (Tuesday night).
  - ▶ if two or more persons assigned to the same paper, only the best presentation will be presented in the seminar and the talk will be considered as a bonus grade. Main grades will be based on the submitted final presentations and the summary report.
  - ▶ Students who were not able to present will have the chance to present a poster (10 min) in the final session of the seminar.
  - ▶ Peer Review: 3 of your peers will receive the presentation and their feedback will be referred back to you by the end of the week.
    - ▶ Peer Review feedback should be sent by Friday noon, a week before the presentation.

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## Grading:

- ▶ Presentation (50% of the mark)
- ▶ Submission of the Summary Paper due 4 weeks after term break(50% of the mark)

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## Presentation:

- ▶ Presentation will be divided into 30 minutes talk and 15 minutes discussion

## Presentation should include four main parts:

- ▶ Introduction
- ▶ Summarize Related Work
- ▶ Explain the proposed model
- ▶ Discuss the experiments

## It is important to:

- ▶ Not omit crucial parts of the paper such as the evaluation, the algorithms, the baselines, etc.
- ▶ Try to provide your own interpretation of the models

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## Summary Paper:

- ▶ Will be a paper like document, one for each participant, of maximum 20 pages
  - ▶ Introduction
  - ▶ Summarize Related Work
  - ▶ Explain the proposed model
  - ▶ Discuss the experiments
- ▶ Submit three hard copies with **spiral binding** to our secretary (hinzemelching@ismll.uni-hildesheim.de ) and upload a digital copy on Learn-Web
- ▶ A template will be provided
- ▶ More details in the next lecture

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## Semester Plan:

- ▶ Two Brief lectures about:
  - ▶ How to read a paper
  - ▶ How to present and write a summary
- ▶ Weekly presentations
- ▶ Submission of the Summary Paper
- ▶ **Attendance:** You can only miss 2 presentations.