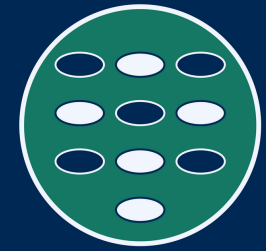




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# DAT390

## Data science seminar

2 Literature review

2.5 Citations and BibTeX

2.6 Group collaboration plans



# Highlight talk schedule for today

Monday, 2<sup>nd</sup> October 2023

Peer feedback from ...

15.15 – 15.19 #1 Ole Benjamin Gauslaa

15.19 – 15.21 #1 David Ajaegbu

15.22 – 15.24 #2 Petter Bøe Hørtvedt

**Load-bearing capacity of the surface based on satellite data**

15.27 – 15.31 #3 Tonje Martine L. Kirkholt

15.31 – 15.33 #3 Razieh Kaveh

**(undeclared topic)**

15.36 – 15.40 #4 Karan Kumar

15.40 – 15.42 #4 Avnik Orbelians

**(undeclared topic)**

15.45 – 15.49 #5 Bikesh Shrestha

15.49 – 15.51 #5 Haakon Tiller Vangsnes

**Low-rank methods in Julia**

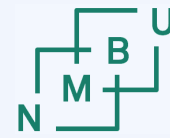


# Highlight talk schedule for next week

Monday, 9<sup>th</sup> October 2023

Peer feedback from ...

- |  |    |                      |               |    |                        |
|--|----|----------------------|---------------|----|------------------------|
| 15.15 – 15.19  | #1 | Sougata Bhattacharya | 15.19 – 15.21 | #1 | Mathilde Haglund       |
| <b>Knowledge graphs for software security assessments and cyber threat intelligence</b>      |    |                      |               |    |                        |
| 15.23 – 15.27  | #2 | Sujan Devkota        | 15.27 – 15.29 | #2 | Disha Preetha Kannan   |
| <b>Image super-resolution for sperm detections and prediction of motility and morphology</b> |    |                      |               |    |                        |
| 15.31 – 15.35  | #3 | Artush Mktrchyan     | 15.35 – 15.37 | #3 | Jony Karmakar          |
| <b>Explainable AI readiness of cancer research data</b>                                      |    |                      |               |    |                        |
| 15.39 – 15.43  | #4 | Halvor Steffensen    | 15.43 – 15.45 | #4 | Torjus Strandenes Moen |
| <b>Tsetlin-machine methods over gene data of deep-sea species</b>                            |    |                      |               |    |                        |
| 15.47 – 15.51  | #5 | Isak Vartdal-Gjerde  | 15.51 – 15.53 | #5 | Gurubaran Rajeshwaran  |
| <b>Evaluating the performance of video segmentation models for car accident detection</b>    |    |                      |               |    |                        |
| 15.54 – 15.58  | #6 | Aarej Malik          | 15.58 – 16.00 | #6 | Michael N. Tholstrup   |
| <b>(undeclared topic)</b>  |    |                      |               |    |                        |



# Outcome of the first group meetings

All groups met and selected literature recommendations.

They also chose their group names\*

1. **Visionary Mind**
2. **The Second Land Pirate**
3. **The Overfitters**
- 4.
- 5.
6. **BANKTOG**
- 7.
8. **The Forecasters**

\*All except for Group 5.

# Outcome of the first group meetings

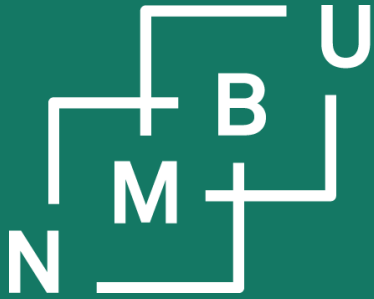
All groups met and selected literature recommendations.

They also chose their group names:

1. Visionary Mind
2. The Second Land Pirate
3. The Overfitters
4. Thesis Titans IV
- 5.
6. BANKTOG
7. Thesis Titans VII
8. The Forecasters

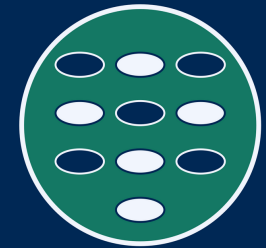
Who are the true thesis titans?

... only time will tell.



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## 2 Literature review

### 2.5 Citations and BibTeX

# What bibliographic data are given in usual practice?

You should have a paper in front of you right now, together with one or two neighbours. It is one of the literature recommendations selected by the groups.

Take five minutes to do the following:

- **Look into the reference list** for that paper. Among the references, identify a journal article and a conference paper.
- **What bibliographic data are given for a journal article?** Write a list.
- **What bibliographic data are given for a conference paper?** Write a list.

Journal article:

- Author names (first name: initials)
- Paper title (?)
- Journal title (is it abbreviated?)
- ...
- ...

Conference paper:

- Author names (first name: initials)
- Paper title (?)
- Conference name? Or is it the proceedings book title?
- ...
- ...

# What bibliographic data are given in usual practice?

You should have a paper in front of you right now, together with one or two neighbours. It is one of the literature recommendations selected by the groups.

Now we will try and reproduce such a typical literature entry using BibTeX:

- Create a BibTeX entry for a journal article.
- Create a BibTeX entry for a conference paper.
- Cite them in a LaTeX file and compile it using LaTeX and BibTeX.

Journal article:

- Author names (first name: initials)
- Paper title (?)
- Journal title (is it abbreviated?)
- ...
- ...

Conference paper:

- Author names (first name: initials)
- Paper title (?)
- Conference name? Or is it the proceedings book title?
- ...
- ...



# Providing digital object identifiers (DOI)

DOIs are persistent identifiers (PIDs), and it is considered good practice to use them - specially for a work submitted as a student in data science.

The canonical way in BibTeX would be through the "doi" entry:

```
@article{...  
  doi = {10.1007/s11705-021-2046-x}  
}
```

**Problem:** Some BibTeX styles ignore the "doi" entry!

**Alternatives** (only use them if the "doi" entry does not work):

```
url = {https://dx.doi.org/10.1007/s11705-021-2046-x}
```

or

```
note = {doi:10.1007/s11705-021-2046-x}
```

# Providing digital object identifiers (DOI)

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@article{...  
  doi = {10.1007/s11705-021-2046-x}  
}
```

Remarks:

- For your literature list, it is most important that the style is **consistently always the same**: Either use DOIs wherever possible, or don't use them.
- Even if you give a DOI, **provide all the other key bibliographic data** also. Exception: You are very limited in space, due to a hard page limit.
- When giving the DOI, **don't additionally give a URL**, and vice versa.

# Examples: How could these citations be improved?

Ramirez, C. A. M., Greenop, M., & Ashton, L. (2020). Applications of machine learning in spectroscopy. <https://doi.org/10.1080/05704928.2020.1859525>

Cited in text as: Ramirez mfl., 2020

# Examples: How could these citations be improved?

Ramirez, C. A. M., Greenop, M., & Ashton, L. (2020). Applications of machine learning in spectroscopy. <https://doi.org/10.1080/05704928.2020.1859525>

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[IND(2018)] Conceptual understanding of convolutional neural network- a deep learning approach. *Procedia Computer Science*, 132:679-688, 2018. ISSN 1877-0509. doi: <https://doi.org/10.1016/j.procs.2018.05.069>. URL <https://www.sciencedirect.com/science/article/pii/S1877050918308019>. International Conference on Computational Intelligence and Data Science.

Cited in text as: [IND(2018)]

# More technicalities (based on group submissions)

What information not to give in a literature list:

- The **ISSN** of a journal. (As opposed to the ISBN of a book.)
- The **publisher of a journal**. (As opposed to the publisher of a book.)
- The **month** in which a paper was published. (As opposed to the year.)

Styles and conventions depend on journals and the field of work, but from experience, the above are always seen as unusual (therefore, unprofessional).

Redundant or excessive information when referencing the work in the text:

- Use “et al.” when there are many authors – don’t list all the names.  
(In the manuscript text; in the literature list, you *can* list all the names.)
- Use numerical citations [1] or author-year citations (First *et al.*, 2023), but not both at once – this looks like a mistake (First *et al.*, 2023) [1].

Always: Do provide enough information so that the paper can be found even without searching for the paper title.

# More technicalities (based on group submissions)

What information not to give in a literature list:

- The ISSN of a journal. (As opposed to the ISBN of a book.)
- The publisher of a journal. (As opposed to the publisher of a book.)
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Styles and conventions depend on journals and the field of work, but from experience, the above are always seen as unusual (therefore, unprofessional).

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**Always: Do provide enough information so that the paper can be found even without searching for the paper title.** (Where they exist, include page numbers!)

# Examples: How could these citations be improved?

[Lin21] Hongjie Lin. Construction of fuzzy ERP data analysis system based on deep learning. In *2021 Third International Conference on Intelligent Communication Technologies and Virtual Mobile Networks (ICICV)*. IEEE, February 2021.

Cited in text as: [Lin21]

# Examples: How could these citations be improved?

[Lin21] Hongjie Lin. Construction of fuzzy ERP data analysis system based on deep learning. In *2021 Third International Conference on Intelligent Communication Technologies and Virtual Mobile Networks (ICICV)*. IEEE, February 2021.

Cited in text as: [Lin21]

Zhu, X. (2005). Semi-supervised learning literature survey.  
<https://minds.wisconsin.edu/handle/1793/60444>.

Cited in text as: (Zhu, 2005)



# Focus on high-quality academic references

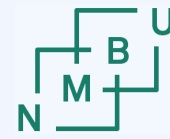
To appear professional, focus on citing:

- Journal articles
- Conference papers
- Contributed chapters in edited volumes

You are allowed to cite any other sources, including technical reports.  
But there should be a very good reason!

Zhu, X. (2005). *Semi-supervised learning literature survey*.  
<https://minds.wisconsin.edu/handle/1793/60444>.

Cited in text as: (Zhu, 2005)



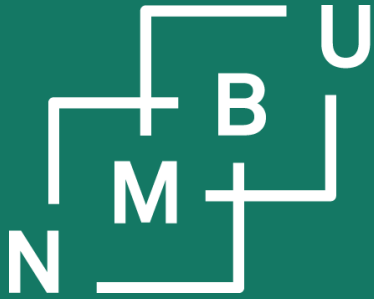
# When finalizing your literature review ...

This is the first step toward your DAT390 report, and toward your thesis.

You will receive feedback concentrating on three questions:

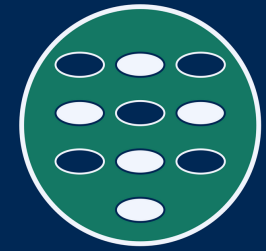
- 1) Are you covering the key aspects of the state of the art?  
(Such as the methods and the results and knowledge from previous work.)
- 2) Do you analyse the references from your own point of view?  
(Instead of summarizing the references from *their* point of view.)
- 3) Are the references to high-quality material, and are they cited correctly?  
This looks like a technicality, but is very important in assessing your work.

To make the feedback most valuable, concentrate on these items as well.



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## 2 Literature review

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2.6 Group collaboration plans

# What your document should discuss

The group submission by 20<sup>th</sup> October is a mandatory activity.

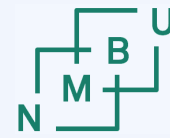
It should have three elements (each up to two pages, 11 pt font, A4 format):

- Synergy from a **planned group collaboration** beyond this semester.  
(Only involving the group members, how can you support each other?)
- **Proposed student-organized activity** for the coming semester.  
(This would reach out to more than the group, but we will do only one.)
- **Outcome and impact** of the proposed activity.  
(How will you and the community benefit if the activity is selected?)

You can cite references. The literature does not count toward the page limit.

Indicate all who co-authored your document. Keep in mind that for all those who do not contribute, the necessary consequence is that they fail DAT390.

The proposals will be evaluated by all the students together, in a competitive process. However, the result will have no impact on your character grade.



# What your document should discuss

The group submission by 20<sup>th</sup> October is a **mandatory activity**.

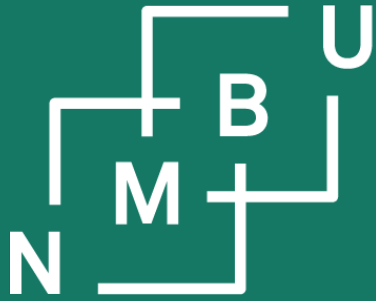
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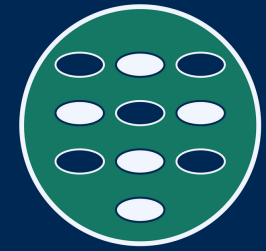
Indicate all who co-authored your document. **Keep in mind that for all those who do not contribute, the necessary consequence is that they fail DAT390.**

**If you experience any challenges in connecting with your group colleagues, say so as soon as possible, so that you can be reassigned to another group.**



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# DAT390

## Data science seminar

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