

Machine Learning 1

Lecture 1.1 - Course Info

Erik Bekkers



Admin: Course outline

- ▶ Lectures, Lab and Homework sessions (2 hours each):

- ▶ Lectures: 2 times per week (each 2 hour)

Pre-recorded

- ▶ Released on Mondays

- ▶ Lab session: 1 time per week

Via Zoom

- ▶ On Wednesdays

- ▶ Homework/theory session: 1 time per week

On Campus

- ▶ On Fridays

Admin: Grading policy

- ▶ 20 % homework assignments (homework/theory sessions)
- ▶ 20 % programming assignments (lab sessions)
- ▶ 60 % final exam (see course content on Canvas)
 - ▶ You need to pass the final exam with 5.5+ in order to pass
 - ▶ A possible resit replaces the final score (in which case the grade is 100% determined by resit)

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Admin: Lectures

- ▶ Videos + slides will be released on Mondays
 - ▶ Posted on a (unlisted) Youtube channel
 - ▶ Links will be on Canvas
- ▶ We will experiment with an extra live Q&A first session on 2 September at 13.00h;
 - ▶ If successful we plan more
 - ▶ Most Q&A will be done online via Piazza and at the Friday homework sessions on campus
 - ▶ Link posted on Canvas

Admin: Lab assignments

- ▶ Laptop exercise classes (laptop colleges) on Wednesdays via Zoom
 - ▶ Zoom links will be posted on Canvas
- ▶ 3 assignments to hand in
 - ▶ Made available on canvas
 - ▶ Jupyter notebooks (with predefined conda envs)
- ▶ Must be handed in teams of 2
 - ▶ Team up with someone in the same group as you ([see Datanose](#))
 - ▶ Please partner up before the second sessions -> otherwise random
 - ▶ Find each other on Piazza
- ▶ Late submissions will not be graded
- ▶ [For detailed instructions, see Canvas!](#)

Admin: Homework assignments

- ▶ Exercise classes on Friday on Campus
 - ▶ During class: study practice exercises + ask your questions
 - ▶ At home: make hand-in assignments
- ▶ Must be handed in individually
- ▶ Assignments are found at ANS Delft (online learning platform)
 - ▶ Submit in latex format
 - ▶ Solutions should contain derivations
 - ▶ Recommendation: Practice on paper and practice with overleaf.com
 - ▶ Final exam will be in the same format, also with ANS Delft
- ▶ You can help each other and discuss, but do not copy-paste!
- ▶ For detailed instructions, see canvas!

Admin: On Campus Sessions

- ▶ Each Friday: your time-slot can be found on Datanose
- ▶ In small groups (max 8-12, depends on room)
- ▶ Hence 20 (!) sessions distributed over the entire day
- ▶ Taskforce Covid-19 safety measures
(see also <https://www.uva.nl/en/current/coronavirus/coronavirus.html>)
 - ▶ 1.5 meter distance can be guaranteed and should be maintained at all times
 - ▶ We request of you to wear face masks (will be distributed on site in case you don't have one)
 - ▶ Disinfectants are available at the rooms. Please wash your hands before you enter

Admin: General

Canvas

All course content and instructions:

- Where to find lectures/exercises
- How to get started
- What is the course content
- ...

Piazza

Here all interaction takes place:

- Ask questions to TAs
- Ask questions to fellow students
- Contribute to answers
- ...

Prerequisite knowledge

- ▶ Probability theory
- ▶ Programming
- ▶ Calculus
- ▶ Vector calculus
- ▶ Linear algebra

Prerequisite knowledge

Extra resources:

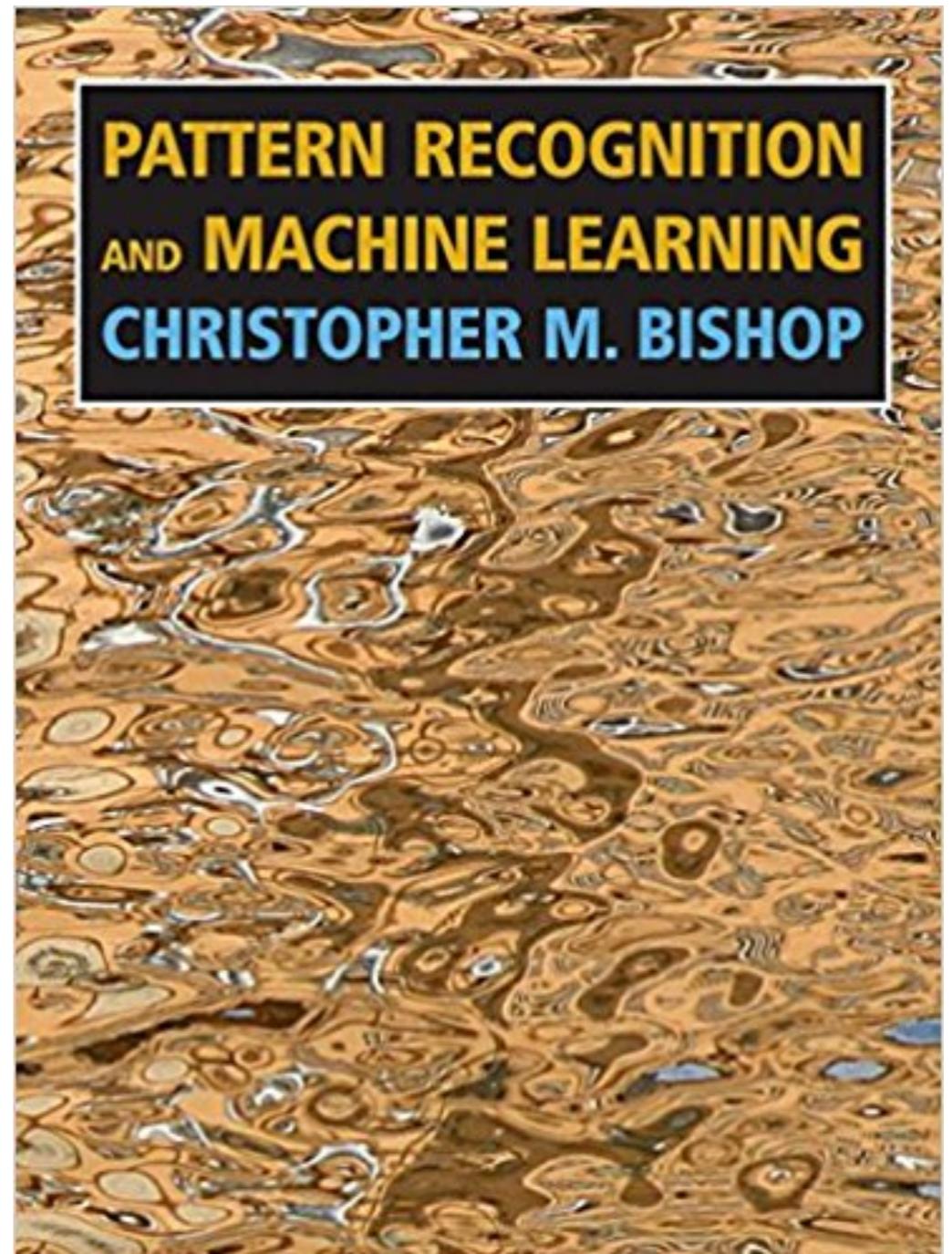
- ▶ Self-study course Mathematics for Artificial intelligence
(see canvas)
- ▶ Book: Mathematics for machine learning (see canvas)
- ▶ Extra video lecture by UvA colleague Leo Dorst on
Mathematical preliminaries/Appendix of book of Bishop
(see canvas)

Literature: Main book

Pattern Recognition and
Machine Learning

- Christopher Bishop

Machine learning from a
probabilistic point of view

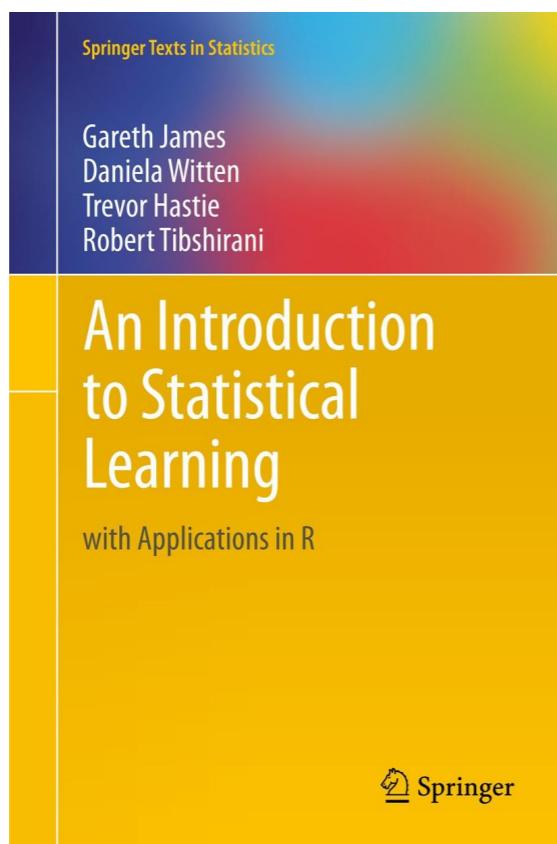


Literature: Other books

An Introduction to Statistical Learning

- Gareth James, Daniela Witten, Trevor Hastie, Robert Tibshirani,

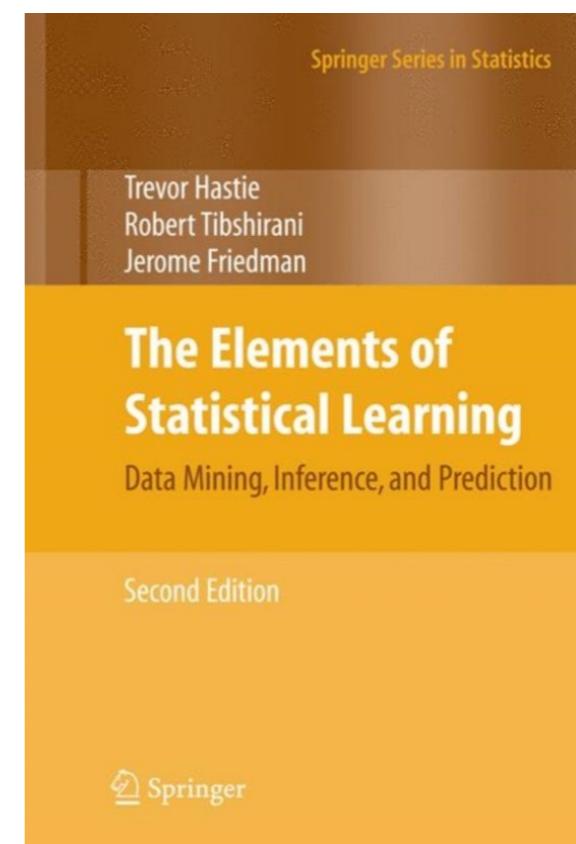
Introduction to Machine learning as a statistical tool.



The Elements of Statistical Learning

- Trevor Hastie, Robert Tibshirani, Jerome Friedman

More advanced view of Machine learning as a statistical tool.





Erik Bekkers
(Teacher/Course coordinator)



Christos Athanasiadis
(Senior Teaching Assistant)

Teaching Assistants (all PhD students in ML)



Benjamin Miller



Teodora Pandeva



David Ruhe



Leon Lang



Rob Hesselink



Thiviyan
Thanapalasingam



Fiona Lippert



Miltos Kofinas



Marco Federici

Announcement (Inclusive AI Community)



<https://uva-iai.github.io>

Apply for the Inclusive AI Mentorship program

Unique opportunity to get advice from senior peers (PhDs, postdocs and assistant profs) from academia and industry!

Mentees should expect to be able to:

- ask mentor for practical advice, e.g. how to write a CV or motivation letter, where to apply for jobs, when to apply for PhDs
- network with other students
- seek non-academic advice from mentor
- learn how to present their research
- connect with other researchers

For underrepresented groups in the AI master

**Unsure if you qualify?
Apply anyway!**



This initiative is supported by



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European Laboratory for Learning and Intelligent Systems

Announcement (Master AI Programm Committee)



If you encounter any problems during programme related event or a course and you want to file a complaint or submit separate feedback, please do not hesitate to contact the **programme committee** at: ocai-science@uva.nl

For more information, please see:

<https://student.uva.nl/ai/content/az/programme-committee/programme-committee.html>

Announcement (Tom Lieberum)

Slack workspace for master AI 2020 students

- ▶ Slack workspace
- ▶ Discuss course topics
- ▶ Collaborate and connect
- ▶ Sign up via

https://uva-aimaster2020.slack.com/join/shared_invite/zt-gkllw4xu-MXivbE6AcPKpDbXILS~oCg#/

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