02477 Bayesian Machine Learning

Summary of exam information (2024)

- **Formalities**
  - Exam duration: 4 hours
  - Aids: All aids (laptops, books, slides, code etc) allowed except internet
  - ChatGPT and other tools requiring internet are **not** allowed.

- **Exam hand-in**: The hand-in for the exam is **digital**. That is, you'll need to upload a **PDF** of your final solution.
  - As long as your solution (text, equations etc.) is easily readable, you can use any tool you want to produce the solution (e.g. Jupyter notebooks, Word, latex etc.)
  - You can also copy/paste equations and figures into Word (or similar) if you prefer. Just make sure the solution as a whole is easy to read and understand.
  - Make sure to test **before the exam** that you can produce a PDF without internet access.
  - Jupyter notebooks can be converted to PDFs, but some students have experienced problems doing this without internet access, so make sure to test it before hand if you are planing to use this option.

- **Type of questions**: There will be different types of questions for the exam. For example
  - There will be questions on the form "Compute/determine/evaluate ... "
  - There will be no "prove that"-type questions, but a few questions will require you to do **analytical calculations**.
  - There will also be questions of the form: "Explain ..."

- **Your solution**
  - **Explain and justify your arguments** and provide intermediate results when possible
  - This allows you to get full or partial credit even if you get the end result wrong (e.g. due to a typo etc)
  - For each question, state the key equation(s) you are using. For questions that require you to produce a numerical answer, show code if possible or at least explain in words how you obtain the result.
  - For questions requiring numeric evaluations, you are welcome to use the code from the course, but you can also use any other (offline) tools if you prefer, i.e. Python, Maple, Matlab. Just state how you arrived at your solutions.

- **Preparing for the exam**

- There is of course many ways to study for an exam, and you should of course stick to what you think is best for you. Several students have asks for suggestions for have to prepare for the exam, so here is a couple of ideas.
- If you studied and understood the material covered in the weekly exercises and the assignments, then you should be well-prepared for the exam.
- Therefore, I would suggest focusing on the exercises and the assignments, and then go to the slides or book for elaborations when needed.
- For example, for the different models we have covered, you could study
  * what is the purpose of the model? what type of problem does it solve?
  * how is the prior and likelihood of the model defined?
  * how is the posterior distribution computed/approximated?
  * how is the posterior predictive distribution computed/approximated?
  * how do you make prediction with given the model?

Best of luck with the exam :-)