

# UNIVERSITY OF OSLO

Faculty of mathematics and natural sciences

Exam in: IN 5400/IN 9400 – Machine Learning for Image Analysis

Day of examination: June 4 2021

Examination hours: 9.00–13.00

This exercise set consists of 14 pages.

Appendices: None

Permitted aids: All

Information and tasks are given on the next pages.

*(Continued on page 2.)*

**It is important that you read the following two (2) cover pages carefully before you start.**

**General information:**

- Read the entire exercise text before you start solving the exercises. Please check that the exam paper is complete.
- Important messages during the exam are given directly from the course teacher on the course's semester page. It is therefore important that you check the course's semester page regularly.
- Your answer should reflect your own independent work and should be a result of your own learning and work effort.
- All sources of information are allowed for written home exams. If you reproduce a text from books, online articles, etc., a reference to these sources must be provided to avoid suspicions of plagiarism. This also applies if a text is translated from other languages.
- You are responsible for ensuring that your exam answers are not available to others during the exam period, neither physically nor digitally.
- Remember that your exam answers must be anonymous; do not state either your name or that of fellow students.
- If you want to withdraw from the exam, press the menu at the top right of Inspira and select "Withdraw".

**Collaboration during the exam:**

It is not allowed to collaborate or communicate with others during the exam. Cooperation and communication will be considered as attempted cheating. A plagiarism control is performed on all submitted exams where text similarities between answers are checked. If you use notes that have been prepared in collaboration with others before the exam, this might be detected in a plagiarism control. Such text similarities will be considered an attempt at cheating.

**Cheating / Dishonesty / Unfair advantage during an examination**

Read about what is considered cheating on UiO's website. <https://www.uio.no/english/studies/examinations/cheating/index.html>

**Further notes:**

*(Continued on page 3.)*

- File upload: You have been given 30 min. extra time for uploading files (e.g. digital hand drawings). Please see also <https://www.uio.no/english/studies/examinations/submissions/options-for-hand-drawings.html>.
- You can mix handwriting, hand drawings, digital drawings and digitally typed documents. Handwritten drawings are okay. Handwritten text on drawings is okay. Digitally typed text is preferred over handwritten text because of less potential for misreading.
- You are responsible for the readability of your handwriting. You are responsible for the checking of the quality of scans of any drawings or handwritten parts. Remember that you can scan also using mobile phones.
- Calculations: show your intermediate steps of calculations.
- Most of your answers should include a discussion, typically a few sentences.
- **submit one pdf-file in inspera.** In this file, the exercises should be answered in given order. Any figures or drawings **MUST** be included at the correct place in the document.  
Windows: you can import scanned drawings into some office document format with typed text and export as pdf. Linux: same as for windows. Also: pdfunite allows to concatenate many pdfs into one.
- If you lack information in the exam text or think that some information is missing, you may make your own assumptions, as long as they are justifiable within the context of the exercise. In such a case, you should make it clear what assumptions you have made.
- Plan your time so that you can try to answer as many subtasks as possible.

**Contact information:**

User support for the exam <https://www.mn.uio.no/english/studies/exam/user-support.html>

*(Continued on page 4.)*