

# Master Computer Vision & Data Science

## Additional admission requirements and procedure

Academic year 2027-2028



### Version management

| Version Nr.     | Date       | Changes                                                                             | Status                                                      |
|-----------------|------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------|
| 2027-2028       | 31-03-2026 | Added text on use of AI, no further changes to the 2026-2027 version at this stage. | 2027-2028 Draft for final discussion by Programme Committee |
| 2027-2028 Final | 25-09-2026 | No changes                                                                          | Approved by all stakeholders                                |

## 1. Introduction

The Computer Vision & Data Science master's degree is a one-year intensive programme preparing students for professional careers in image data analysis. In addition to standard academic requirements, Additional Admission Requirements help ensure that students have the necessary knowledge, skills, and motivation. These are assessed during the intake procedure. Carefully review the requirements, exercises, and tutorials before submitting your Personal Statement. Programming requirements are especially strict to safeguard study success.

## 2. Additional admission requirements

Besides a bachelor's degree, the following additional qualitative admission requirements apply:

- ✓ demonstrable solid programming skills and the ability to explain technical work adequately;
- ✓ mathematical knowledge and skills required to understand and explain the principles of computer vision and data science;
- ✓ adequate motivation for a full-time one-year ambitious and challenging programme.

There is a maximum inflow of 25 students per academic year, to ensure the quality of the programme. The first come - first serve principle is applied, based on the order of registration in [studielink.nl](https://studielink.nl).

### 2.1 Indicators

The programme will look at the following indicators to determine whether the additional qualitative admission requirements have been met:

- ✓ Scientific Programming – The prospective student is able to explain technical work adequately and the prospective student is able to:
  - Program complex code such as algorithms in Python.
  - Show python code that is readable, efficient, modular, pythonic, and follows an official style guide. HTML, front-end, databases or interfaces will not be accepted.
  - Use debugging tools, Numpy, Matplotlib, Anaconda, PIP, Linux, and Windows.
- ✓ Mathematics – The prospective student is able to understand and clearly explain the following mathematical concepts:
  - Mathematics: Basic mathematical equations and notations.
  - Linear Algebra: vectors, inner product, matrices, matrix multiplication, inversions, determinant, trace, diagonal, norm, etc.
  - Probability: Gaussian distribution, probability distributions.
  - Statistics: Random variables, mean, variance.
  - Calculus: Derivatives, chain rule.
  - Optional: Eigenvectors and values, spaces, convexity, Bayes theorem, covariance, correlation.
- ✓ Motivation – The prospective student is motivated to learn more about the field during an intensive one-year full-time study.

## 2.2 Documentation to check the requirements

To start the intake procedure we ask you to hand in the following documents as supporting evidence:

1. Personal Statement including:
  - Motivation for choosing this master's.
  - Evidence of programming and math skills (e.g., education, work experience, languages/libraries, publications).
2. Programming Code:
  - Personal code samples (check first two indicators in 2.1 for guidelines).
  - Solutions to the admission assignments that you can find here: [Admission](#)

You will receive a personal upload link for uploading these documents.

## 3. Admission procedure for additional requirements

The attached flow-chart 'Intake cycle Master Computer Vision & Data Science' provides an overview of all steps involved for checking additional requirements. In short the steps are:

1. Subscribe in Studielink.nl.
2. Preparation
  - Write Personal Statement.
  - Upload personal code samples and assignment solutions to GitHub (public link).
3. Submission – Upload documents via your personal link before the deadline.
4. Intake Interview (via MS Teams, in English)
  - Discuss code in detail.
  - Answer math questions.
  - Explain motivation.
5. Decision
  - If qualitative requirements are met, quantitative (seat availability) are checked.
  - Outcome (admission or rejection) is communicated within two weeks.

Several intake sessions are organized per year; invitations follow the registration order until seats are filled. The final intake day for the academic year 2027-2028 is Monday 30 August 2027, provided there are still open spots.

## 4. Final information

Some final details about the admission procedure.

- This document covers programme-specific requirements. CSA checks general academic and language requirements in parallel. Admission is final only when both sets are met.
- The procedure stops if CSA rejects the applicant or if the applicant withdraws.
- Personal Statements not meeting standards after a 48-hour revision lead to rejection.
- Absence or technical failure during intake (e.g., unable to share code) also leads to rejection.
- Admission outcomes apply only to the year of application. There is a maximum of two attempts per applicant, the attempts don't need to be in consecutive academic years.
- Using AI during the admission process can be tempting, but we strongly advise against it. The procedure is meant to assess your own skills - skills you will need to successfully start and complete the programme. If we determine that the work is not your own, or

you are unable to explain it, your application will be rejected. The process is designed to support your success, so completing it independently gives you the best foundation.

## **5. Applying and contact information**

To apply for the intake, please follow the instructions in the cover letter confirming the procedure. For more information about the admission, please contact our coordinator Meintsje de Vries, [cvds@nhlstenden.com](mailto:cvds@nhlstenden.com).

Check our website, movie and project website for more information about our master's programme and projects our students work on.

<https://www.nhlstenden.com/en/courses/computer-vision-data-science-ma>

<https://www.youtube.com/watch?v=5tE5x7x2aPM>

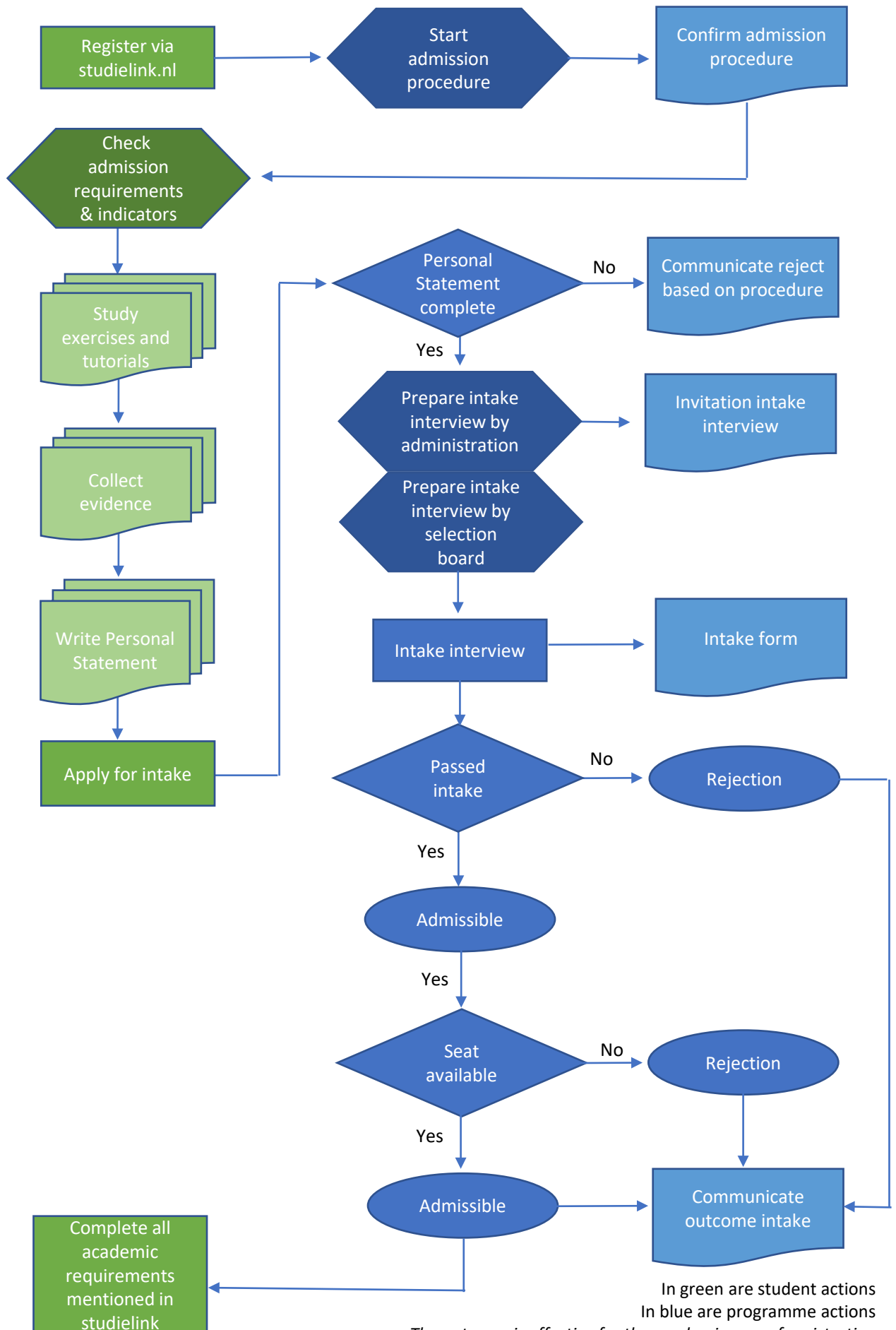
<https://www.cvds-nhlstenden.com/category/projects/>

## **6. Attachments**

The flow-chart 'Intake cycle Master Computer Vision & Data Science' and the 'Intake form Master Computer Vision & Data Science' are attached to this document for a complete overview.

# Intake Cycle Master CV&DS

Academic Year 2027-2028



In green are student actions  
In blue are programme actions

*The outcome is effective for the academic year of registration*

**Goal**

The Computer Vision & Data Science master's degree is an ambitious and challenging programme, that prepares students as a professional within the rapidly evolving domain of image data analysis. In one year, the Computer Vision & Data Science master's programme will take students into the depths of the domain. Admission requirements are applied to help assure students have the right knowledge, insight and skills at the start of the programme. During an intake the programme determines whether the prospective master's student meets the required starting level. The team member conducting the intake uses this form to record and substantiate their judgement.

**Procedure**

The basis for the intake is a Personal Statement that is provided by the prospective student in preparation for the intake interview. Within this Personal Statement the prospective student provides evidence for meeting the additional (programme) admission requirements. During the online intake interview the prospective student is asked some detailed questions about the provided code and is asked to explain some of the mathematical concepts mentioned in the indicators. Goal of the intake interview is to gain further insight in the level of programming experience, mathematical knowledge and skills in explaining technical work. The motivation for application for the master's programme will also be discussed. At the end of the intake, it is determined whether the student is admissible according to the qualitative requirements. If so, subsequently, it is determined whether the student is admissible according to the quantitative requirements. The student will be either qualified as admissible or rejected. The result of the intake will be communicated with the student within two weeks following the intake interview.

**Admission requirements**

In general, the programme wants prospective students to have knowledge and skills in scientific programming and mathematics. Also motivation is an important requirement. The indicators used in determining these requirements are listed in the intake form. The following table elaborates on the evidence used to determine the requirements. All communication within this procedure is in English.

| Requirement            | Evidence used to prove indicators                                                                                                                                                                                                                  |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Programming experience | Scientific programming experience as mentioned in the Personal Statement and tested during the intake by asking questions about the indicators with the help of the prospective student's own supplied programming code and admission assignments. |
| Mathematics knowledge  | Mathematics knowledge as mentioned in the Personal Statement and tested during the intake by asking questions about the concepts mentioned in the indicators.                                                                                      |
| Motivation             | Demonstrated in the Personal Statement and during the intake interview.                                                                                                                                                                            |

**Instructions for use by column of the intake form**

|          |                                                                                                                                                                                                                                                                                                                                                                                             |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Column 1 | - this column contains the admission requirements and indicators (criteria) on which the prospective student is assessed.                                                                                                                                                                                                                                                                   |
| Column 2 | - give your judgement here in terms of <ul style="list-style-type: none"> <li>o <b>Insufficient (I)</b>: the provided and demonstrated evidence does not (sufficiently) demonstrate the required level;</li> <li>o <b>Satisfactory (S)</b>: the provided and demonstrated evidence is at an acceptable level, the required level is reached.</li> </ul>                                     |
| Column 3 | - provide a concrete summary and motivate the judgement given by the selection board;<br>- write down concrete and specific findings to support the judgement: <ul style="list-style-type: none"> <li>o for 'Insufficient': indicate which indicators are missing or need development;</li> <li>o for 'Satisfactory': motivate by what evidence the level has been demonstrated.</li> </ul> |
|          | <b>NORM</b> : during the intake all requirements must be demonstrated to satisfactory to be admissible.<br><b>VALIDITY</b> : the outcome is valid for the 2027-2028 academic year.                                                                                                                                                                                                          |

Name prospective student: \_\_\_\_\_ Student number: \_\_\_\_\_  
 Intake date: \_\_\_\_\_ Name selection board: \_\_\_\_\_

| Admission Requirements (with indicators)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Judgement | Motivation of the judgement |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------------|
| <b>1. Demonstrable solid programming skills and the ability to explain technical work adequately</b><br>The prospective student is able to explain technical work adequately and the prospective student is able to: <ul style="list-style-type: none"> <li>• Program complex code such as algorithms in Python.</li> <li>• Show python code that is readable, efficient, modular, pythonic, and follows an official style guide.</li> <li>• Use debugging tools for Python</li> <li>• Use libraries like Numpy and Matplotlib</li> <li>• Use virtual environments like Anaconda and package manager like PIP</li> <li>• Use operating systems Linux and Windows</li> </ul>                                                                                                     | I / S     |                             |
| <b>2. Mathematical knowledge and skills required to understand the principles of computer vision and data science</b><br>The prospective student is able to understand and clearly explain the following mathematical concepts: <ul style="list-style-type: none"> <li>• Mathematics: Basic mathematical equations and notations.</li> <li>• Linear Algebra: vectors, inner product, matrices, matrix multiplication, inversions, determinant, trace, diagonal, norm, etc.</li> <li>• Probability: Gaussian distribution, probability distributions.</li> <li>• Statistics: Random variables, mean, variance.</li> <li>• Calculus: Derivatives, chain rule.</li> <li>• Optional: Eigenvectors and values, spaces, convexity, Bayes theorem, covariance, correlation.</li> </ul> | I / S     |                             |
| <b>3. Adequate motivation</b><br>The prospective student is motivated to learn more about the field during an intensive one-year full-time study.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | I / S     |                             |

**Outcome: admissible / rejection**