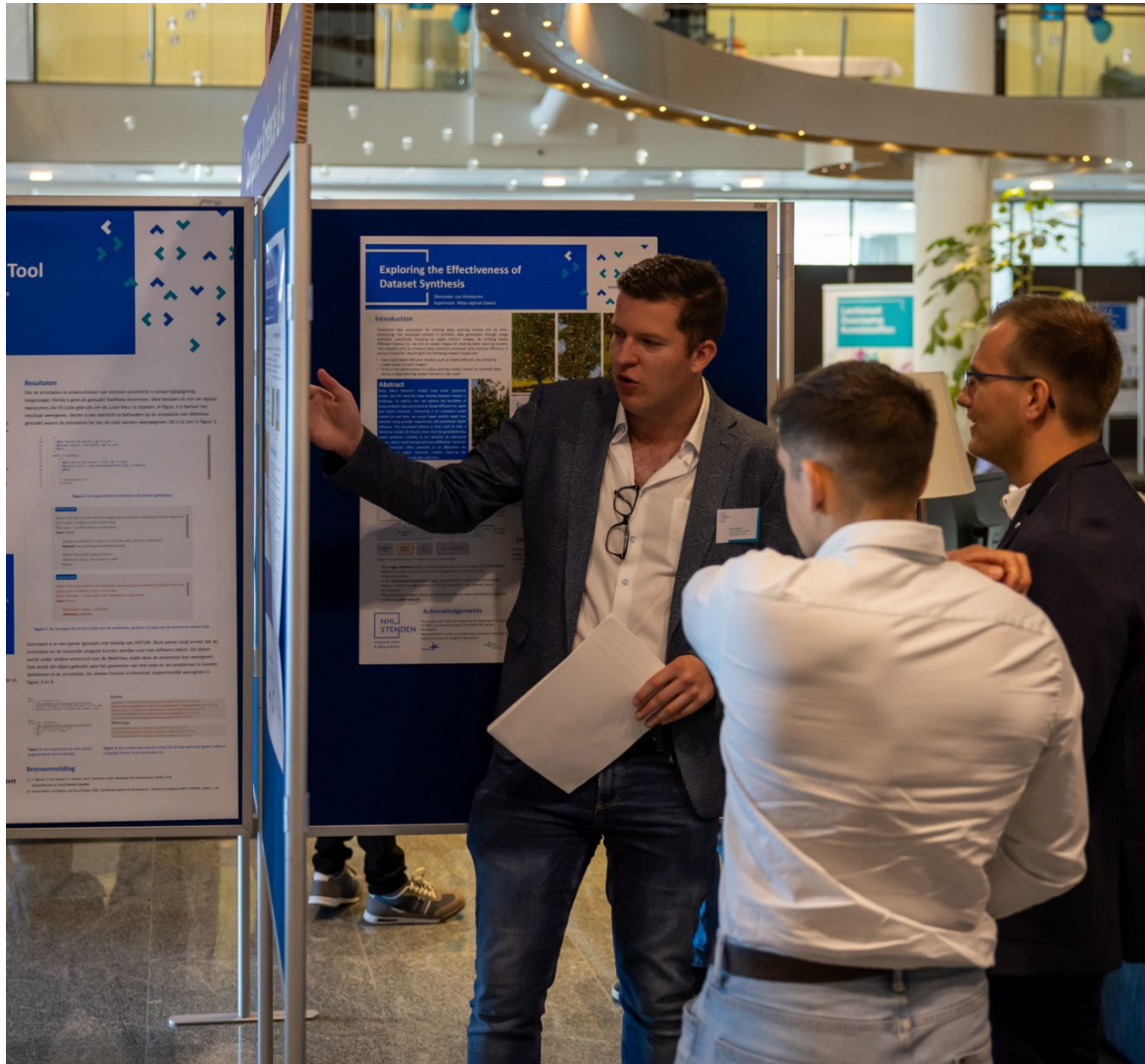


# Master Computer Vision & Data Science

## Additional admission requirements and procedure

Academic year 2025-2026



### Version management

Version Nr.	Date	Changes	Status
2025-2026	2-10-2024	Outline approved by Programme Committee	Discussed and after final changes approved by Management and Programme Committee
2025-2026.2	10-12-2024	Minor adjustments; added final intake date, corrected information about GitHub link	No extra approval needed

## 1. Introduction

The Computer Vision & Data Science master's degree is an ambitious and challenging programme, that in one year prepares students as a professional within the rapidly evolving domain of image data analysis. Admission requirements are applied to assure students have the right knowledge, insight and skills at the start of the programme. During the intake procedure the programme determines whether the prospective master's student meets the required starting level. Make sure to study the admission requirements, with provided exercises and tutorials, carefully before handing in your Personal Statement. The additional admission requirements are strict, especially for programming, to help ensure the study ability and successful completion of the programme.

## 2. Additional admission requirements

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

- ✓ demonstrable solid programming skills and the ability to communicate 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.

To ensure the quality of the programme we also apply quantitative requirements, being a maximum inflow of 25 students per academic year. The first come - first serve principle is applied, based on the order of registration in studielink.nl. The final intake day for the academic year 2025-2026 is Monday 25 August 2025, provided there are still open spots.

### 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 communicate technical work adequately and the prospective student is able to use:
  - Debugging tools for Python.
  - Libraries like Numpy and Matplotlib.
  - Virtual environments like Anaconda and package manager like PIP.
  - Operating systems 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

During an online intake interview the requirements are checked. To start the intake procedure we ask you to hand in the following documents as supporting evidence:

1. Personal Statement containing the following information:
  - a. your motivation for choosing our master's programme specifically,
  - b. skills/experiences that show you have solid programming skills and mathematical knowledge and skills. Examples of things you can mention here are: educational background, work experience, overview of programming languages and libraries you are skilled in, links to papers or code you have published.
2. Programming code showing your skills, containing:
  - a. personal code that shows your skills as a programmer,
  - b. the solutions to the Scientific Programming admission assignments: [Admission](#) (you should be able to comprehend and solve these assignments without too much effort).

You will receive a personal link for uploading the documents.

## 3. Admission procedure for additional requirements

In short, the steps in the procedure for checking the additional requirements are:

1. Prepare, read additional admission procedure and:
  - a. Work on your personal statement based on requirements as mentioned
  - b. Select a relevant personal code example and make it available on GitHub (open environment with access for people with the link)
  - c. Make the admission assignments and make the results available on GitHub (open environment with access for people with the link)
2. Hand in documentation when receiving the personal link (keep track of the deadline)
3. Intake (when requirements are met)
  - a. Prepare meeting, check MS Teams access and have the personal code and assignment code ready so you can share them on the screen during the meeting
  - b. Answer questions (order: in depth questions about code, knowledge about mathematics indicators, personal motivation)
4. Positive, then complete all academic requirements for final admission

A student applies for admission by registering for the master's programme in studielink.nl. After registering the student will receive by mail a letter confirming the admission procedure. During an online intake interview the programme determines whether the prospective master's student meets the required starting level. Several intake days are organized per year – prospective students are invited in order of registration, for as long as seats are still available. All communication within the procedure is in English.

When the Personal Statement and supplied code meet the basic requirements, the prospective student receives in their student mail an invitation for an online intake interview. During the 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 (see 2.1). The goal of the intake interview is to gain further insight in the level of programming experience, mathematical knowledge, skills in explaining technical work and your motivation.

The 'Intake form Master Computer Vision & Data Science' is used to record the findings during the intake interview (attached).

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 by the programme. The result of the intake will be communicated with the student within two weeks following the intake interview. The programme will also enter the result in progress (student registration).

To finalize the admission, the student must meet all academic requirements before the start of the academic year, or earlier deadline when applicable (communicated by CSA). The admission procedure is visualized in the flow-chart 'Intake cycle Master Computer Vision & Data Science' (attached).

## 4. Final information

Some final details about the admission procedure.

- This document describes all additional admission requirements applied by the master's programme. NHL Stenden as an academy also applies academic admission requirements, like a Bachelor's degree and language requirements for NON-EU/EEA students. These requirements are checked by our Central Student Administration department (CSA) in a parallel procedure. Both the academic requirements and additional requirements need to be met before final admission.
- When the Personal Statement doesn't meet the basic requirements after a 48-hour recovery period, the prospective student gets rejected.
- Being absent during the intake without timely notice means we will reject your application. We will also reject your application when we aren't able to hear you, see you and/or go through your code by you sharing it on your screen. In these cases, the meeting quality is too low to proceed and we give the opportunity to the next student in line to apply.
- The outcome of the admissions procedure is effective for the academic year of application. There is a maximum of two attempts per applicant, the attempts don't need to be in consecutive academic years.

## 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>

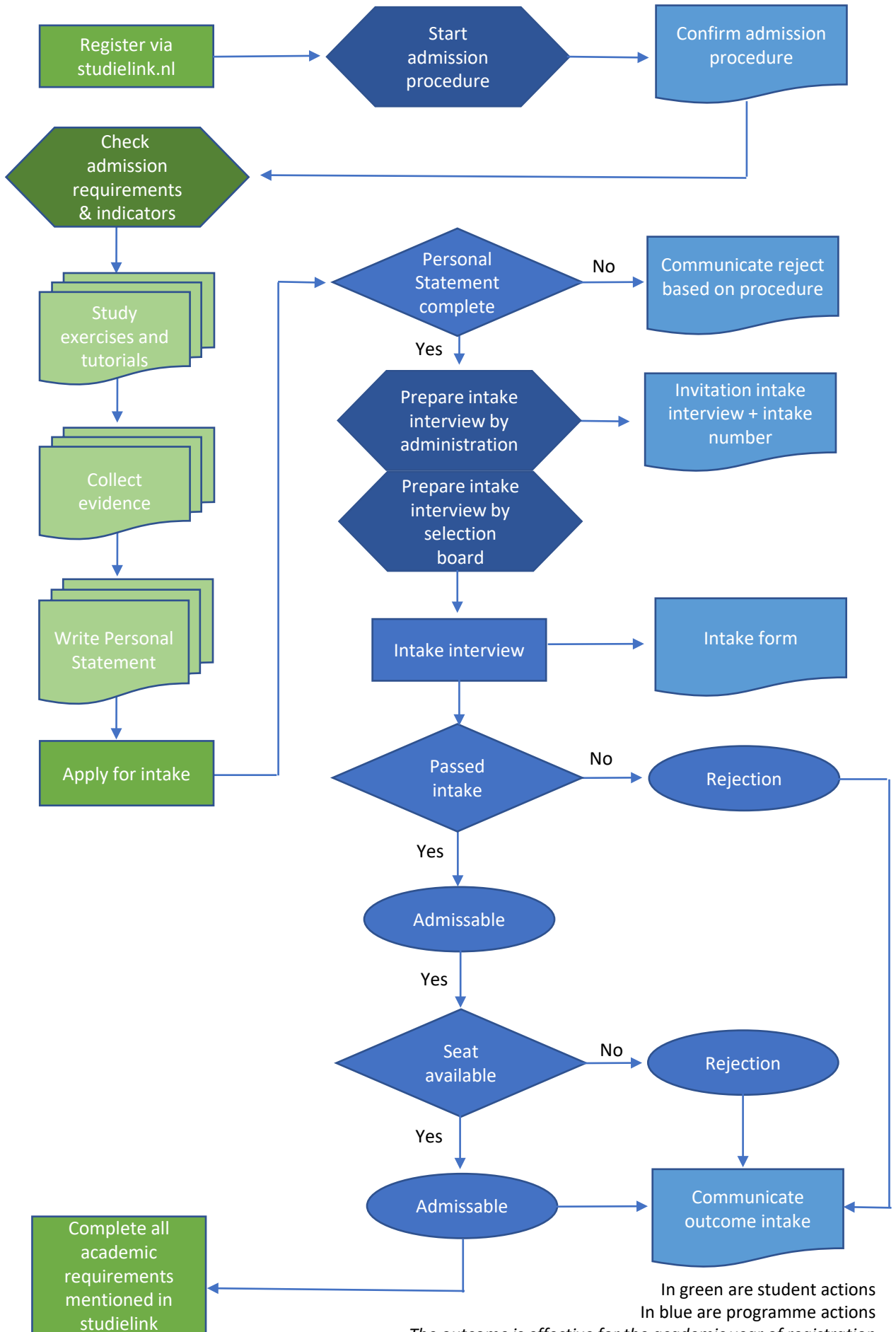
<https://www.cvds-nhlstenden.com/category/projects/>

## 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 2025-2026



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 two team members conducting the intake use this form to record and substantiate their joint 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; - 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. <b>VALIDITY:</b> the outcome is valid for the 2025-2026 academic year.

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

Admission Requirements (with indicators)	Judgement	Motivation of the judgement
<p><b>1. Demonstrable solid programming skills</b></p> <p>The prospective student is able to communicate technical work adequately.</p> <p>The prospective student is able to use:</p> <ul style="list-style-type: none"> <li>• Debugging tools for Python</li> <li>• Libraries like Numpy and Matplotlib</li> <li>• Virtual environments like Anaconda and package manager like PIP</li> <li>• Operating systems Linux and Windows</li> </ul>	I / S	
<p><b>2. Mathematical knowledge and skills required to understand the principles of computer vision and data science</b></p> <p>The prospective student is able to understand and clearly explain the following mathematical concepts:</p> <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	
<p><b>3. Adequate motivation</b></p> <p>The prospective student is motivated to learn more about the field during an intensive one-year full-time study.</p>	I / S	

**Outcome: admissible / rejection**