Minor Computer Vision & Data Science

Learning Outcomes – overview

Academic year 2020-2021

Context

The minor is tested integrally with three learning outcomes. Table 1 shows the context in which these learning outcomes are tested.

	Assessment
Independence	• Cooperates under supervision with specialists and peers. • Responsible for results of own work and study. • Responsible for managing own workflow. • Assesses based on available information, considering social and scientific context.
Complexity	• Specific work environment with some uncertainties. • One problem with multiple competing solutions. • Existing knowledge is available.

Table 1: Context of Learning Outcomes Minor of Computer Vision & Data Science

Learning Outcomes

The Minor of Computer Vision & Data Science has three Learning Outcomes. Table 2 shows the Learning Outcomes, including the indicators used to assess each Learning Outcome and the deliverable that can be used proving the indicator.

LOC1	**The student selects, applies and tests, within a team and methodologically correct, machine-learning algorithms that automate visual inspections that meet the project's specifications.**	
	• Has knowledge and skills in the fields of computer vision, machine learning and deep learning and knows how to apply them.	Topics
	• Can make a substantiated choice for materials and methods and documents and uses them correctly. • The student can document specifications and can evaluate quality with the supervisor.	Paper
	• The quality of the prototype is of a sufficient level in relation to the complexity. • Can apply and test based on project's specifications. • Can demonstrate their prototype to the supervisor and explain it with the correct level of complexity.	Prototype
	• Takes responsibility for their own work. • Uses a research management method and applies it correctly.	Process
LOC2	**The student creates and manages, under supervision, a representative annotated and balanced dataset with the required quality to test machine-learning algorithms.**	
	• Has knowledge and skills in the fields of computer vision, machine learning and deep learning and knows how to apply them.	Topics
	• Can describe the dataset and substantiate choices for contents, annotations, structure and storage. • Substantiates choice with regards to imaging hardware and the configuration.	Paper
	• There is a representative annotated and balanced dataset. • The dataset is easy to use for applying and testing algorithms. • Can analyze and evaluate the performance of the methods on the datasets of the project.	Prototype
	• Acts ethically with regard to data management, privacy and	Process

	confidentiality.	
LOC3	**The student develops himself as a professional.**	
	• Has knowledge and skills in the fields of computer vision, machine learning and deep learning and knows how to apply them.	Topics
	• Can write a technical paper with a clear, consistent and convincing narrative. • Performs a survey of related topics.	Paper
	• The student shows his own input in the project, can substantiate and explain it.	Prototype
	• Contributes to a congress and can present their work to a broad audience. • The student asks for feedback on his development and makes demonstrable use of it.	Process

Table 2: Learning Outcomes Minor of Computer Vision & Data Science with indicators and deliverables