Unit minor Big Data & AI, term 3.3/3.4, 2EC
Course Guide Big Data & AI Project
(1922PBDAIZ (Design phase) & 1922BDPOCZ (Proof of Concept phase))
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Content of course

Test composition

Competency numbers [phase 1 and/or 2]	Assessment criteria and/or (assessable) learning goals	Level
Analyze: 2.7 Analysis of available ICT options in the field; (OP) [2]	Deliverable E: Literature review	Applying
Analyze: 3.5 Analysis (quantitative and/or qualitative) of the current and future situation in the area of, for example, policy, strategy, alignment and architecture, while applying the most commonly used methods; (OP) [1] [2]	Deliverable C: Technical design Deliverable E: Methodology	Applying
Analyze: 3.12 Analyzing data to train the ML-system (SW); [1] [2]	Deliverable A: Dataset analysis Deliverable A: Dataset visualization Deliverable A: Cleaning of dataset Deliverable E: Methodology	Applying
Analyze: 4.2 Carry out thorough, theoretically supported research into technological (inter-organizational) process innovations (AI, machine & deep learning, digital twins, blockchain, etc.). (OP). [2]	Deliverable E: Research questions Deliverable E: Conclusion & discussion	Applying
Design: 3.10 Designing a data architecture and a model architecture (e.g. training a ML algorithm); including a testing strategy for the data and ML models (SW). [1]	Deliverable C: Graphical design Deliverable C: Technical design Deliverable C: Functional design	Applying
Advise: 2.5 Provide advice on new ICT possibilities, including package selection and advice. (OP). [1] [2]	Deliverable B: Model selection Deliverable D: Demonstration	Applying
Advise: 3.11 Advising on the data architecture and model architecture, as well as corresponding frameworks. [1]	Deliverable C: Technical design	Applying
Professionalisation: 3.1 Self-steering ability; [1] [2]	Deliverable B: Model selection Deliverable D: Code quality & documentation	Applying
Professionalisation: 3.2 Social communication skills; [1] [2]	Deliverable A: Dataset visualizaion Deliverable E: Reporting techniques	Applying
Professionalisation: 3.3 Creativity and problem-solving ability; [1] [2]	Deliverable A: Dataset visualization Deliverable D: Code quality & documentation	Applying
Professionalisation: 3.4 Awareness of social responsibility. [1] [2]	Deliverable B: Baseline performance Deliverable E: Customer satisfaction	Applying

Research: 3.1 Mapping the relevant aspects of a complex problem; [1] [2]	Deliverable A: Dataset analysis Deliverable E: Research questions	Applying
Research: 3.2 Clear formulation of goal and research questions based on the problem analysis; [1] [2]	Deliverable B: Model selection Deliverable E: Research questions	Applying
Research: 3.5 Collecting, analyzing and interpreting the relevant research data; [1] [2]	Deliverable A: Dataset analysis Deliverable E: Conclusion & discussion	Applying
Research: 3.6 Link substantiated conclusions and recommendations to research results. [1] [2]	Deliverable B: Model selection Deliverable B: Model implementation Deliverable E: Conclusion & discussion	Applying
The cut-off rate (fail/pass limit) of each of the deliverables is:		55%
Form of this test	A: dataset + data analysis report (1922PBDAIA) B: model + model analysis report (1922PBDAIB) C: design report (1922PBDAIC) **Final grade Design phase = 30% deliverable A + 40% deliverable B + 30% deliverable C** D: code folder + presentation (1922BDPOCA) E: final report (1922BDPOCB) **Final grade PoC phase = 50% deliverable D + 50% deliverable E**	
Prerequisite knowledge	Condition for participation in optional education: Propedeuse (propedeutic exam) achieved. Vocational training internship with a satisfactory completion.	
Teaching/work format	Mostly independent work, with meetings with 2 teachers / consultants every two weeks.	
References and other study resources	1-pager with project assignment	
Use of Moodle and/or other IT applications	Consult schedule, deliverable rubrics.	
Assessment	Other method (A) / assessment	

Weekly schedule

Week	**Study / work format**	**Subject**	**Homework**	**Study load (hours)**	
				Self-study	Contact hours
Term 3					
1	Kickoff	Introduction to minor and to available projects	Review projects and decide on preferences	4	2
2			Meet with you client, familiarize yourself with your assignment & dataset	15	
3			Write action plan. Start working on data analysis report.	15	
4	Consult session	Discuss action plan	Finalize 1st version of data analysis report	15	0.5

5	Consult session	Discuss deliverable A: Dataset	Give peer-feedback, review received feedback	15	0.5
6			Hand in deliverable A	15	
7	Consult session	Discuss deliverable B: model	1st version of model report	15	0.5
8			Give peer-feedback review received feedback	15	
9			Hand in deliverable B	15	
10			1st version of TFGD	12.5	
			Subtotal	**136.5**	**3.5**
			Total term 3	**140 (=5*28)**	
Term 4					
1	Consult session	Discuss deliverable C: TFGD	Give peer-feedback, review received feedback	16	0.5
2			Hand in deliverable C	16	
3	Consult session	Discuss proof of concept implementation	Realizing proof of concept architecture	16	0.5
4			Realizing proof of concept deployment	16	
5	Consult session	Discuss code quality	Realizing proof of concept front-end	16	0.5
6			1st version of deliverable E; final report	16	
7	Consult session	Discuss final report	Give peer-feedback, review received feedback	16	0.5
8			Prepare final presentation	16	
9	Final presentation		Present, finalize deliverables	18	2
10			Hand in deliverable D & E	18	
			Subtotal	**164**	**4**
			Total term 4	**168 (6*25)**	