Teaching portfolio

1. Teaching CV: A list of teaching and supervision tasks, including specification of academic fields, scope, level (bachelor, master, continuing education, PhD). Please state the teaching method used (e.g. lecture, class teaching, exercises, supervision, examination, coexamination, distance teaching, internet-based teaching and evaluation of teaching). Please also indicate the language of instruction.

Courses 2022 Fall Agile Software Engineering (5 ECTS), Bachelor of IT, Computer Science, and Software Engineering 5th semester. The course was on methodologies and general topics for agile approaches to software engineering with 149 students attending. The course has a 20 minutes oral exam with an external censor resulting in an individual grade on the 7-point scale. 2020 - 2022 Fall Specialization course on Systems development (5 ECTS) for CS-IT9, IDA9, SW9, and DAT9 (20 students). I organized and participated in 12 sessions focused on discussions with students and two fellow researchers of recently published research papers. The course had 20 / 8 / 12 students. It had 40 minutes oral exams with an internal examiner and external censor, resulting in an individual grade on the 7-point scale. 2021 Fall Agile Software Engineering (5 ECTS), Interaction Design 7th semester and Digitalization and Application Development 9th semester. The course was on methodologies and general topics for agile approaches to software engineering with 40 students attending. The course had a 20 minutes oral exam with an external censor resulting in an individual grade on the 7-point scale. 2016 - 2020 Spring Advanced Topics in System Development / System Development in Praxis (5 ECTS), Computer Science 8th semester. The course was on the theory and practice in systems development focusing on current research papers and interviews with practitioners. I was responsible for 1/2 of the course in 2016 & 2020 and the full course in 2017, 2018, & 2019. The course had 20 / 24 / 23 / 40 students attending and a written exam with an internal censor graded on the 7-point scale. 2016 - 2019 Fall Qualitative Methods (5 ECTS), Interaction Design 5th semester. The course provided an overview of qualitative research methods and their use in interaction design / human-computer interaction. The course had 35 / 29 / 40 / 30 students attending and an oral exam with an internal censor graded on the 7-point scale. 2017 Fall Specialization course on Systems development and Human Computer Interaction (5 ECTS), Computer Science, Informatics, Software Development Master, and Software Engineering 9th semester. The course was on research topics and approaches used in the Human Centered Computing research group. I did two general lectures on qualitative data collection and analysis. Moreover, I participated in 6 sessions focused on systems development (10 students attending) involve discussions with students and two fellow researchers of recently published research papers. The course had 40 minutes oral exams with an internal examiner and external censor, resulting in an individual grade on the 7-point scale. 2016 Spring Systems Analysis and Design (5 ECTS), Bachelor of IT and Informatics 4th semester. The course was on object-oriented analysis and design of software systems. The course had 40 students attending and a written exam with an internal censor graded as passed/not-passed. 2015 Spring IT based improvement of organizational processes (5 ECTS), Cand.it in IT management 2nd semester. The course was on approaches to understand and improve processes in different types of organizations. The course had 45 students attending and a 25 minutes oral exam with an external censor (Karsten Roost) resulting in an individual grade on the 7-point scale. 2012 - 2014 Fall Software Engineering (5 ECTS), Computer Science and Software Engineering 5th semester. The course was on general topics in the traditional and agile approaches to software engineering with 75 / 95 / 99 students attending. In addition to classroom lectures, the students were assigned a mini-project to choose a development method and software engineering techniques for their semester project. The students evaluated and documented their choices in a written report that they handed in and presented at the oral exam. The course had a 20 minutes oral exam with an external censor resulting in an individual grade on the 7-point scale. 2012 - 2014 Spring Software Engineering (5 ECTS), Bachelor of IT and Informatics 4th semester. The course was on general topics in the traditional and agile approaches to software engineering with 25 / 55 / 40 students attending. In addition to classroom lectures, the students were assigned a mini-project to choose a development method and software engineering techniques for their semester project. The students evaluated and documented their choices in a written report that they handed in and presented at the oral exam. The course had a 20 minutes oral exam with an external censor resulting in an individual grade on the 7-point scale. 2013 Fall Specialization course on Systems development (2.5 ECTS), Computer Science, Informatics, and Software Engineering 9th semester. The course was on advanced topics in information systems development research with 10 students attending. Session involved student presentations of research papers and class discussions. The course had 40 minutes oral exams with an internal examiner and external censor resulting in an individual grade on the 7-point scale. Publishing interpretive research (2.5 ECTS), with 11 PhD students attending. I served as a co-lecture doing lectures and organized an exercise in content analysis of qualitative data. I gave feedback on an individual exercise related to the research methodology in their projects that was required to pass the course. 2009 - 2010 Fall Software Management (3 ECTS), Computer Science 9th semester. The courses were on central and advanced topics in management of software development with 15 students attending. I thought 1/3 of the lectures varying between lecture presentations and organized class discussions of the course literature. The course had a 20 minutes oral exam with an internal censor resulting in an individual grade on the 7-point scale. Project supervision 2022 Fall One 9th semester Software Engineering group with 3 students and one 9th semester Computer Science – IT group with 1 student (20 ECTS). The 3 students did action design research at a university department to increase survey response rates through gamification. The other student conducted a case study of technical debt activities in a software company. 2022 Spring One 10th semester Software Engineering group with 2 students (30 ECTS) did an extended action design research project with the company Inqlude IT to develop a gamified platform for learning about web-accessibility. Four 10th semester groups with students from Digitalization and Application Development (7 students) (30 ECTS). 3 students did action design research on an application for finding roommates. 2 students did action research on benefits

realization from automatic testing in a software company. 1 student did an action case study of dependency mapping of project risks in a Scrum team. 1 student did a case study on transparency in agile software development. 2021 Fall One 9th semester Software Engineering group with 2 students (20 ECTS) doing action design research with the company Inqlude IT to develop a gamified platform for learning about web-accessibility. 2021 Spring Three 10th semester groups with students from IT Development and Application (6 students), Computer Science (1 student), and Computer Science – IT (1 student) (20 ECTS). 4 students did a comparative case study of developer motivation and control during COVID19 enforced working from home. 3 students did an extended action research study of deliberation on technical debt in a software organization. 1 student did a case study of how an information system can inform benefits realization of artificial intelligence supported knowledge transfer through onboarding. 2020 Fall Two 9th semester groups with students from IT Development and Application (6 students), Computer Science (1 student), and Computer Science – IT (1 student) (20 ECTS). The 5 student group did a comparative case study of how COVID19 enforced working from home affect employee motivation in two different software development organizations. The 3 student group did action research of deliberation on technical debt in a software organization. 2020 Spring One 10th semester Computer Science – IT masters project (30 ECTS) 3 students developing a mobile application for district heating consumers using data from Aalborg Forsyning and applying autoethnography to investigate their practice without having user studies for guidance. The project thought the students to use concepts and reasoning within information systems development to reflect on systems development practice. One 10th semester IT Development and Application masters project (30 ECTS) 2 students doing action design research on managing employee access to a large number of software systems and services in an engineering organization. 2019 Fall One 9th semester Computer Science – IT project (20 ECTS) 3 students doing autoethnography on clean slate and agile development of a mobile application for district heating consumers using real data from Aalborg Forsyning. One 9th semester IT Development and Application project (20 ECTS) 2 students doing a study of requirements engineering at a library. The project thought the students to use concepts and reasoning within software engineering to formulate a current research problem in a case study. 2019 Spring One 10th semester Informatics Project (30 ECTS) with one student doing action research on integrating UX work in agile software development. The project was co-supervised with Anders Bruun and she started on a PhD afterwards. Two 2nd semester Informatics and Bachelor of IT projects (15 ECTS) with 5 & 7 students developing and evaluating an IT system in collaboration with an organization. The project thought the students basic techniques and tools for developing IT systems for solving the problems of real users. 2018 Fall One 9th semester Software Development Master (15 ECTS) with 3 students doing a literature study of risks pertaining to the product owner role in Scrum. The project thought the students to use concepts and reasoning within information systems development to formulate a current research problem. Five 1st semester Informatics and Bachelor of IT projects as co-supervisor focusing on group processes and learning (10 ECTS) with 4-7 students doing a usability evaluation and communication analysis of a webpage. The project thought the students to conduct problem based learning in a project focusing on usability and communication. 2018 Spring Two 10th semester Software Engineering projects (30 ECTS) with 3 & 2 students. The first project group did action design science research in a small software organization to help them support benefits realization in their customer organizations. The second project group did design science research of benefits points for value estimation in agile software development that was implemented as an extension to the JIRA platform. The project thought the students to use concepts and reasoning within information systems research in systems development. Three 2nd semester Informatics and Bachelor of IT projects (15 ECTS) 6, 6 & 7 students developing and evaluating an IT system in collaboration with an organization. The project thought the students basic techniques and tools for developing IT systems for solving the problems of real users. 2017 Fall Two 9th semester Software Engineering projects (20 ECTS) with 3 & 2 students. The first project group did action design science research in a small software organization to help them support benefits realization in their customer organizations. The second project group did a literature study of the problems pertaining to the product owner role in Scrum. The project thought the students to use concepts and reasoning within information systems development to formulate a current research problem. Five 1st semester Informatics and Bachelor of IT projects as co-supervisor focusing on group processes and learning (10 ECTS) with 4-7 students doing a usability evaluation and communication analysis of a webpage. The project thought the students to conduct problem based learning in a project focusing on usability and communication. 2017 Spring Two 2nd semester Informatics and Bachelor of IT projects (15 ECTS) with 6 & 7 students developing and evaluating an IT system in collaboration with an organization. The project thought the students basic techniques and tools for developing IT systems for solving the problems of real users. 10th semester Informatics project (30 ECTS) with 2 students studying Benefits Realization Management from a Value Co-Creation perspective. The project thought the students to use theory and empirical findings from a municipal organization to understand contemporary practices in realizing benefits with IT. Two 9th semester Software Development Master project (30 ECTS) with each one student earning his masters degree. The first project used Nethnography to understand the developers problems in crowdsourced software engineering. The second project used design science research to support Scrum teams in distributed software development projects. The project gave the student experience with research processes and research settings in information systems development. 2016 Fall 9th semester Informatics project (20 ECTS) with 2 students doing a literature review of Benefits Realization Management from a Value Co-Creation perspective. The project thought the students to use theory and a research method within information systems development to formulate a current research problem. Two 3rd semester Software Development Master projects (20 ECTS) with each one student doing a literature review on 1) Scrum and organizational culture in distributed software development and 2) Crowdsourcing in Software Engineering. The project thought the students to use theory and a research method within information systems development to formulate a current research problem. Four 1st semester Informatics and Bachelor of IT projects as co-supervisor focusing on group processes and learning (10 ECTS) with 6-7 students doing a usability evaluation and communication analysis of a webpage. The project thought the students to conduct problem based learning in a project focusing on usability and communication. 2016 Spring 10th semester Software Engineering project (30 ECTS) with 2 students doing a grounded theory study of reasoning in tailoring scrum presented in a project report and a scientific paper. The project thought the student to use concepts,

methods, and reasoning within software engineering to address a current research problem. 2015 Fall 9th semester Software Engineering project (20 ECTS) with 2 students doing a literature study of the tailoring of Scrum in professional software development. The project thought the students to use concepts and reasoning within information systems development to formulate a current research problem. 2015 Spring Five 2nd semester Cand.it in IT management projects (15 ECTS) at the Department of Political Science, Aalborg University, with each 5 to 6 students working with the various organizations. The project thought students to analyze, design, and implement IT based process improvement in organizations. 2014 Fall 10th semester Computer Science (30 ECTS) project with one student earning his masters degree with a case study of applying code measures in a mature (CMMI 5) software organization. The project thought the student to use concepts, methods, and reasoning within software engineering to address a current research problem. Two 1st semester Cand.it in IT management projects (15 ECTS) at the Department of Political Science, Aalborg University, with 5 and 6 students working with the IT department of two organizations. The project thought students to use contemporary information systems theory and research methods to understand the role of information systems in organizations. 2014 Spring 10th semester Software Engineering project (30 ECTS) with one student earning his masters degree by using action design research in effect driven development of learning applications for tablets. The project thought the student to use concepts and reasoning within information systems to address a current research problem. 4th semester Software Development Master project (30 ECTS) with one student earning his masters degree by using design science research to develop a framework for persuasive technologies for a healthy lifestyle. The project gave the student experience with research processes and research settings. 6th semester Informatics project (15 ECTS) with 6 students earning their bachelor degree by developing a web-based dinner recommender system. The project thought the students to use concepts and reasoning within informatics to develop and evaluate a software based system. 2013 Fall 9th semester Computer Science project (20 ECTS) with 3 students doing a literature study of what code metrics can tell us about software quality. The project thought the students to use concepts and reasoning within information systems to formulate a current research problem. 3rd semester Software Development Master project (20 ECTS) with one student doing a literature review based framework for developing persuasive technologies for a healthy lifestyle. The project thought the student research processes to address knowledge creation for software development and products. 3rd semester Computer Science project (15 ECTS) with six students developing an application for supporting meal planning and shopping lists involving the special offers from various retailers. The project thought the students object oriented development of applications for solving the problems of real users. 2013 Spring Two 6th semester Informatics projects (15 ECTS), with three and two students earning their bachelor degree. The project groups worked respectively on developing a framework for user involvement with elderly software users and developing a recommender system for the Danish nurses union. The project taught students to transform advanced theoretical models into specific IT development and use situations. 2012 Fall 3rd semester Computer Science project (15 ECTS) with five students developing an application for supporting Pen & Paper role playing gaming. The project thought the students object oriented development of applications for solving the problems of real users. 3rd semester Software Engineering project (15 ECTS) with six students developing a shopping assistant for smart phones that combines shopping lists with the special offers from various retailers. The project thought the students object oriented development of applications for solving the problems of real users. 2012 Spring Two 6th semester Informatics projects (15 ECTS), each with three students earning their bachelor degree. The project groups worked respectively on evaluation of activity increasing mechanisms in online communities and development of a social learning game for rhythm didactics to smart phones. The project thought students to transform advanced theoretical models into specific IT development and use situations. 2007 Spring 3rd semester Software Engineering project (17 ECTS) with six students. The project group developed an enigma encryption machine, in a shared assignment across all project groups on the semester. The project taught the students object-oriented programming of a larger assigned system. Continuing education Diploma in Software Construction project (7 ECTS) with two par time students working in industry. The project group investigated agile software development methods in a library's development of web 2.0 service. The project thought the students reflection of their own and others methodological praxis in software development. PhD supervision 2021 - Ashna Mahmood Zada, Department of Computer Science at AAU (with Peter Axel Nielsen) 2020 - Alisa Ananjeva, Department of Computer Science at AAU (with Peter Axel Nielsen) 2018 - 2022 Maria Hoffmann Jensen, Vestas Wind Systems A/S (with Peter Axel Nielsen) Thesis title: Value Creation from Big Data Analytics - A systems approach to enabling bigdata benefits 2016 - 2020 Olivia Benfeldt, Department of Politics & Society at AAU (with Sabine Madsen & Lars Mathiassen). Thesis title: Polycentric governance of organizational data ventures: An organizing logic for data governance in the digital era

2. Study/programme administration and management: Experience in programme management and coordination. A list of study administration tasks, e.g. study board membership, chair of study board, semester or course coordinator, accreditation tasks, etc. Experience in planning teaching activities. Experience in programme development. Participating in committees and commissions etc. on education issues.

Coordination 2019 - Study coordinator for the interdisciplinary Bachelor of IT (BaIT) education at Aalborg University. 2016 - Spring & FallCoordinator on the 1st and 2nd semester Informatics (discontinued in 2019) and Bachelor of IT educations. Organizing semester planning, status seminars, and evaluation meetings with students and lectures. 2013 - 2014 Spring Coordinator on the 6th semester Informatics education. Organizing semester planning and evaluation meetings with students and lectures.

3. Formal pedagogical training: A list of completed courses in university pedagogy, PBL courses, workshops, academic development projects, collegial guidance and supervision, etc. Written assessment from the course in university pedagogy for assistant professors. Participation in conferences on pedagogy and didactics. Please enclose any documentation of the above, such as course certificates, references, etc

2013 - University teacher education for Assistant Professors (Adjunktpædagogikum), Aalborg University (10 ECTS). 2006 - Basic course for university teachers, Aalborg University 2006, (2 ECTS).

4. Other qualifications: Conference contributions and attendance, contributions to debates, scientific articles on pedagogical issues etc. Peer supervision, editorials, mentoring experience or other types of competence development activities.

n/a

5. Pedagogical development and research: Development of new courses, teaching materials, teaching methods, examination types or other types of pedagogical development. Didactic and pedagogical research. Cooperation with external collaboration partners.

n/a

6. References on your teaching skills from superiors or colleagues. Teaching evaluations and any teaching awards received.

n/a

7. Personal reflections and initiatives: Here you may state any personal deliberations as regards teaching and supervision, any wishes and plans for further pedagogical development, plans for following up on student feedback/evaluations, etc. Personal reflections on your own pedagogical practice, including objectives, methods and implementation. This should include an analysis and a reasoned description of your pedagogical activities in relation to your pedagogical understanding and student learning. Thoughts on the teaching method at Aalborg University (which is largely based on group-organised project work and problem-based learning)

I have extensive experience with the form of teaching practiced at Aalborg University as a student and as a teacher on various assignments. Over the years, I have developed a deep understanding of group-organized project work and problem-based learning (P&PBL). I appreciate how P&PBL can bring practice into teaching and research into practice through collaboration among students and practitioners. P&PBL offers opportunity to facilitate student-learning beyond the advisors preceding knowledge. In this way, I often have the opportunity to make teaching a collaborative endeavor with my students. In the university teacher education for assistant professors (Adjunktpædagogikum) I attained knowledge and understanding of theories and methods related to university pedagogy. I have improved my practice skills and competences as teacher and project supervisor and skills on planning, implementing, evaluating teaching and students' learning processes and refined my teaching and supervision in computer science / information systems. Furthermore, I have strengthened my competences in communicating academic knowledge to students and in supervising, supporting, and stimulating the students' learning processes by applying appropriate methods and technological tools. In particular, I have worked with 1) the selection and use of aids for the development of pluralistic learning situations, 2) approaches to manage teaching and research activities according to available resources, 3) reflective project supervision and, 4) appropriating interaction in lectures with many students.

8. Any other information or comments.

n/a