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.

Summary:
I have experience being a course lecturer, course examiner, course censor, course teaching assistant, project supervisor, and project censor.

Course Lecturer, Examiner, Censor, and Teaching Assistant:
2015 - Fall, 1st Semester, DAT1 / SW1, Imperative Programming, Teaching Assistant.
2016 - Spring, 4th Semester, DAT4 / SW4 / CS-IT8, Languages and Compilers, Teaching Assistant.
2020 - Spring, 4th Semester, DAT4 / SW4 / CS-IT8, Languages and Compilers, Teaching Assistant and Examiner.
2023 - Spring, 4th Semester, DV4, Big Data Systems, Teaching Assistant.
2023 - Spring, 8th Semester, SW8, Selected Topics in Programming, Censor.
2023 - Autumn, 7th Semester, SW7, Data Intensive Systems, Teaching Assistant.
2023 - Autumn, 7th Semester, DAT7 / CS-IT7, Selected Topics in Database Research and Practice, Lecturer.
2023 - Autumn, Master i Informatikundervisning, Databaser og Begrebsmodellering, Censor.
2024 - Spring, 4th Semester, DV4, Big Data Systems, Teaching Assistant and Lecturer.

Problem-Based Learning Group Supervisor and Censor:
2015 - Fall, 5th Semester, SW506E15, Title - Turret Intelligently Tracking Lego Enemies, Supervisor.
2015 - Fall, 5th Semester, SW507E15, M.E.D.I.N.A. - Mapping Environments Done Incrementally Nonrandom and Autonomous, Supervisor.
2015 - Fall, 1st Semester, DAT1B2-1A, Optimering af Ray Tracing, Censor.
2015 - Fall, 1st Semester, DAT1B2-1B, Google PageRank, Algoritmen og Anonymitet, Censor.
2015 - Fall, 7th Semester, SW702E15, SCAM - System for Home Care and Monitoring, Censor.
2016 - Spring, 4th Semester, SW402F16, CoDex: A Parallelism Oriented Language, Supervisor.
2016 - Spring, 4th Semester, SW403F16, SPPL - Simple Parallel Programming Language, Supervisor.
2016 - Spring, 4th Semester, SW404F16, Quantum - The Parallel Programming Language, Supervisor.
2016 - Fall, 1st Semester, DAT1B2-07, Rejsekort V2, Censor.
2016 - Fall, 1st Semester, DAT1B2-11, Skemalægning i skoler vha. genetiske algoritmer, Censor.
2016 - Fall, 1st Semester, DAT1B2-13, Kontekstbaseret Sortering af E-mails med Bayesiansk & Genetisk Algoritme, Censor.
2017 - Spring, 4th Semester, SW404F17, CCure, Supervisor.
2019 - Fall, 7th Semester, SW701E19, StudyDojo - The Place of Problem Based Learning, Censor.
2021 - Fall, 9th Semester, CS-21-DT-9-02, Support for Adjustable Sampling Interval in ModelarDB, Co-Supervisor.
2022 - Fall, 7th Semester, CS-22-SW-7-07, Axio - A Scalable Personalized Activity Recommender System, Censor.
2022 - Fall, 7th Semester, CS-22-SW-7-09, Programming Paradigms Practice Platform, Censor.
2022 - Fall, 7th Semester, CS-22-SW-7-11, Massive Open Online Courses Application for Universities, Censor.
2023 - Fall, 1st Semester, CS-23-DAT-1-P1-02, Recipe Suggestion Application, Censor.
2023 - Fall, 1st Semester, CS-23-DAT-1-P1-03, Peer-to-Peer Food Sharing - A SOLUTION TO COMBAT CONSUMER BASED FOOD WASTE, Censor.
2023 - Fall, 1st Semester, CS-23-DAT-1-P1-06, A Healthcare Appointment Scheduling System, Censor.
2023 - Fall, 1st Semester, CS-23-SW-1-P1-16, Optimizing clearance and moveability in minefields, Censor.
2023 - Fall, 7th Semester, CS-23-SW-7-06, Occupancy Estimation using Bluetooth and Wi-Fi - A Demand Driven HVAC Control System, Censor.
2024 - Spring, 4th Semester, CS-24-SW-4-03, Supervisor.
2024 - Spring, 4th Semester, CS-24-SW-4-10, Supervisor.
2024 - Spring, 4th Semester, CS-24-SW-4-12, Supervisor.
2024 - Spring, 4th Semester, DAT4 / SW4, Assisting groups with building compilers and interpreters based on the languages and compilers course, Supervisor.

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.

None.

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

Courses:
2015 - Problem-based Learning at the Department of Computer Science.
2024 - Aalborg University University Pedagogy Program.

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.

None.

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.

2015 - Autumn, 1st Semester, DAT1 / SW1, Imperative Programming, Teaching Assistant:
Created a written and video guide that documents how to install and configure the software required for the course's exercises on macOS.

2020 - Spring, 4th Semester, DAT4 / SW4 / CS-IT8, Languages and Compilers, Teaching Assistant and Examiner:
Assisted with switching the course completely online in one day due to Covid restrictions, and helped design a new type of oral exam where the students had to submit videos in which they answered general questions they had seen before and a few specific questions they had not seen before.

2021 - Fall, 7th Semester, SW7, Data Intensive Systems:
Evaluated a set of pygrametl exercises for use in the course and created solutions for these exercises.

2023 - Spring, 4th Semester, DV4, Big Data Systems, Teaching Assistant:
Wrote a guide that documents how to install and configure the software required for the course's exercises and mini-projects on Microsoft Windows.

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

None.

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)

Teaching Philosophy and Experience:
I strongly prefer teaching students how to work independently and solve problems on their own, e.g., through Problem-based Learning, instead of providing them with concrete answers. Thus, I encourage students to take the initiative, work on problems that motivate them, and reflect on both their processes and their solutions. I have found that students get a much deeper understanding of a topic by actively solving problems related to that topic compared to only passively receiving information about it through literature and lectures. Actively solving problems related to a topic also seems to make it easier for students to recall what they learned from the literature and lectures, and more importantly, teaches them how to learn independently. However, as Problem-based Learning is driven by a problem, it must motivate the students. For example, I found that project proposals should not be too concrete and should not contain specific problems as some

students then focus on solving the provided problem instead of exploring the topic through Problem-based Learning.

Pedagogical Development:
I generally use a data-driven approach to improve my teaching. During each semester I document whenever students have a problem understanding specific topics and what I did at that time to assist the students. For example, when I supervise a group doing Problem-based Learning, I write down what information I provide the students in each meeting, and after the subsequent meeting, I write down how that impacted the students. Then at the end of the semester, I try to determine in what areas I need to improve my supervision based on how well each group I supervised achieved the learning goals and the notes I collected from my meetings with the students. Likewise, when I am a teaching assistant, I write down each question I receive and the answers I provide. After each session, I try to understand why the students needed to ask these questions, e.g., did the students not gain the required knowledge from the lecture or are some of the exercises unclear. In addition, by looking at which topics I had to explain in multiple different ways before the students' questions were answered satisfactorily, I can determine which parts of the syllabus I am unable to disseminate efficiently. Finally, at the end of the semester, I try to determine if there are any patterns in the students' questions, e.g., if most of the questions are about how to interpret the exercises for a specific lecture these exercises should probably be updated.

8. Any other information or comments.

None.