

CENG350 SOFTWARE ENGINEERING

SPRING 2021-2022

PROJECT SPECIFICATION, v1.0

You will perform (i) requirements engineering and (ii) architecture design for a particular software-intensive system, and prepare the associated documents complying with the related standards.

The topic of this semester's project is YOLO, a social robot for creativity. Articles about YOLO are found in the Project folder on the ODTUClass page. Other related materials, such as videos, are also accessible on the internet. In particular, source codes are available on GitHub.

Although we are primarily concerned about the software for YOLO, having a holistic system view is essential. The software architecture paper would be a good place to start.

The focus of project is modelling YOLO as is. However, in the creative spirit of YOLO, you are encouraged to go beyond the existing system and suggest improvements.

Deliveries (both in two installments):

- i. Software Requirements Specification (SRS) (ISO/IEC/IEEE 29148-2011) [12% = 1.2% for part-1 + 10.8% for full document]
- ii. Software Architecture Description (SAD) (ISO/IEC/IEEE 42010-2011) [18% = 1.8% for part-1 + 16.2% for full document]

Guidance will be provided on the application of these standards in the project.

Project work will be part of examination coverage (midterm exams and final) as well.

Ground Rules:

- You may work alone or with a partner. The workload will be the same. (Three person teams are allowed, but they undertake significantly increased workload.)
- Students registered in different sections can be on the same team.
- Discussion and delivery medium: ODTUClass. Follow the instructions.
- Diagramming standard is UML 2.x (with support from SysML). Your UML/SysML diagrams should be importable by StarUML2.
- When you need clarification you may ask your questions on our ODTUClass forum.
- For administrative matters you may send an e-mail to our TA İbrahim Tarakçı, tarakci@ceng.metu.edu.tr

Detailed Schedule

- i. SRS part-1: SRS document, fully formatted, including the system context and the interaction view only: April 8, 9:30

- ii. Final SRS: full document: April 15, 9:30. (Three person teams also submit SyRS using UML+SysML.)
- iii. SAD part-1: SAD document, fully formatted, including the composition view only: May 20, 9:30
- iv. Final SAD: full document: May 27, 9:30. (Three person teams submit System (not only Software) Architectural Description using UML+SysML.)

Other Points:

Building models of systems from different points of view and preparing technical documentation as per an official standard take considerable time. Start today, if you have not started already.

The purpose of the part-1 in each phase is to encourage early start. There will not be enough time to provide individual feedback on part-1; yet, we will provide an overall feedback.

Rubrics for grading will be provided.