

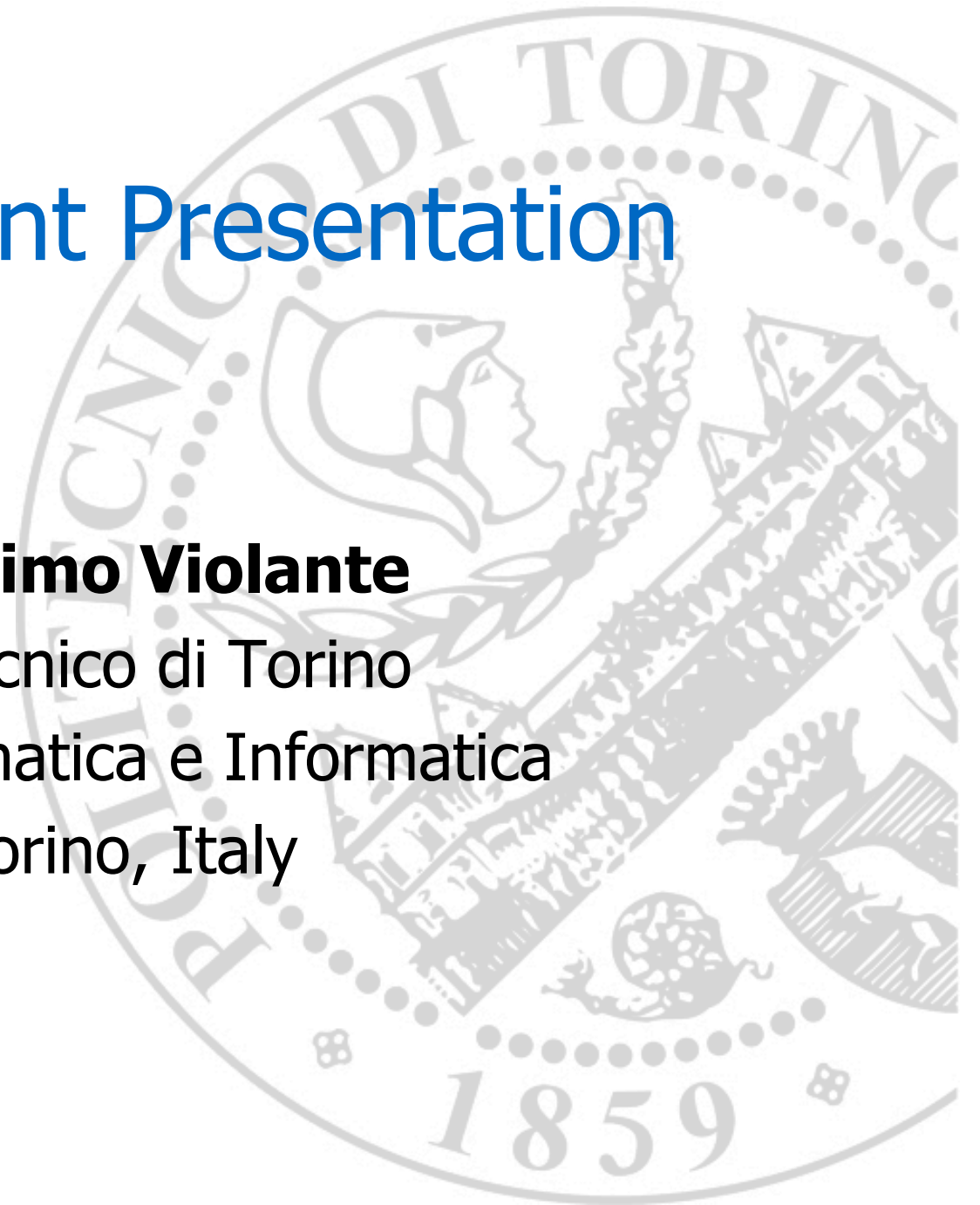
Assignment Presentation

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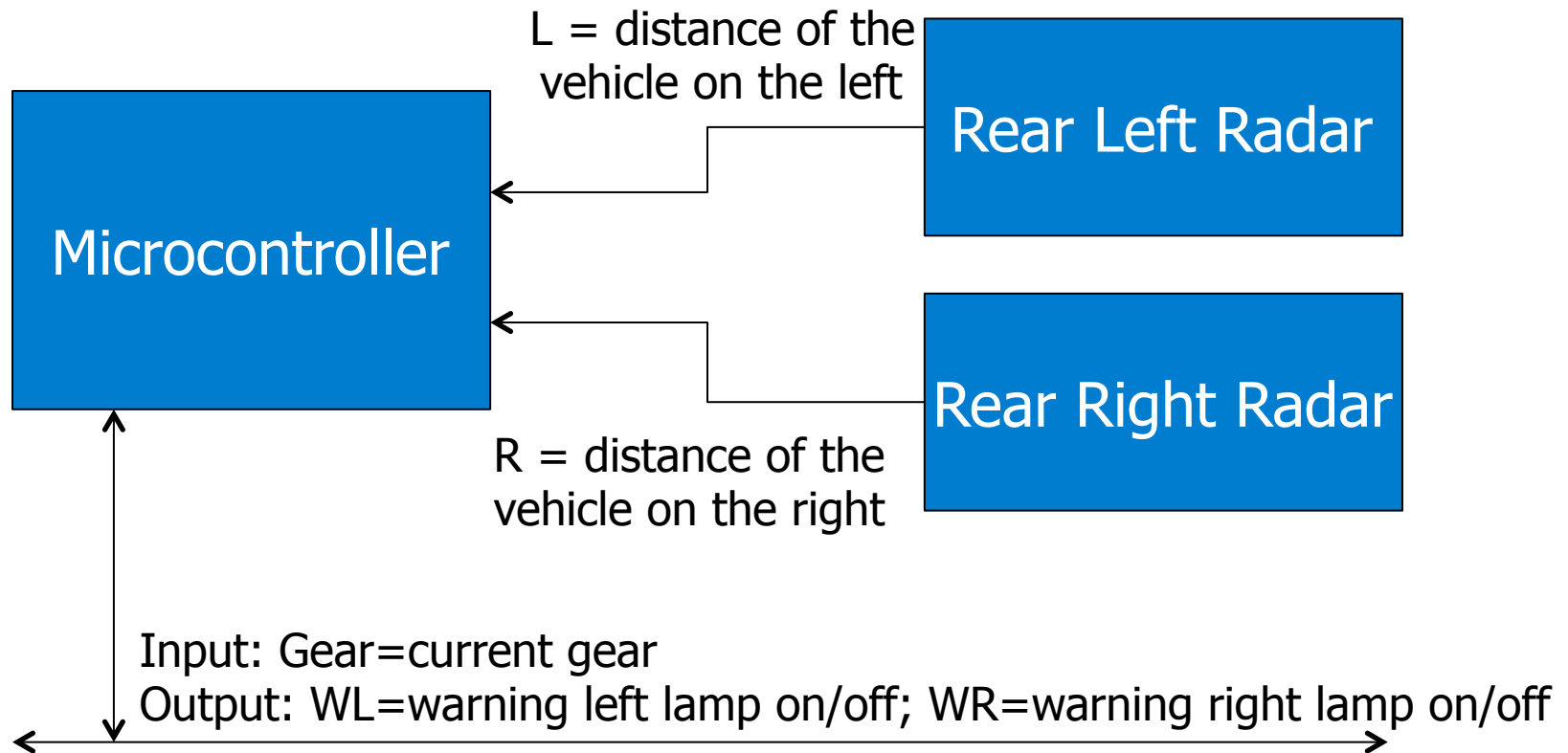


Cross-Traffic Assist

- The CTA aims at:
 - Informing the driver about hidden obstacles on each side of the vehicle during backward maneuvers
- QA operates as follows:
 - In case of reverse gear, the CTA warns the driver if a moving object is detected approaching the vehicle and information is given about its location (left or right)



CTA



The Deliverable

- One report describing the ISO26262 concept phase for the item assigned to you (see “Portale della didattica” for the assignment)
 - Item definition
 - Hazard analysis and Risk assessment
 - Safety Goal
 - Functional Safety Concepts
- Overall goal: provided the adequate level of safety while minimizing the overall cost of the item



Project Assignments

- You are asked to:
 - Design the software architecture of your item according to the AUTOSAR SwC approach
 - Model the software of your item using Simulink
 - Generate the code from the model and test it on the evaluation board using the available sensor
 - The PC is used to simulate the CAN network over the USB/serial interface
 - The distance sensor is used as radar
 - The LEDs available on the board are used for output
 - The BTNs available on the board are used for input

The Deliverable

- Word document describing the software architecture, the software implementation, the hw/sw integration, and the test plan
- Simulink model including
 - Model of the item behavior
 - Test bench for the model
- MBED or native C program for the evaluation board
- You have to provide all the material as ZIP file using “Portale della didattica/Elaborati”