



SY02

UTC LaTeX report

John DOE

June 9, 2025



Contents

1	Introduction	2
2	System Overview	2
2.1	Autonomous Vehicle	2
2.2	Scheduling Constraints	3



1. Introduction

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

2. System Overview

2.1. Autonomous Vehicle



Figure 1: Autonomous vehicle of the Heudiasyc laboratory

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.



2.2. Scheduling Constraints

Availability

Each task can only start after its release date:

$$T_i \geq r_i \quad \forall i \in \{1, 2, 3, 4, 5\}.$$

Deadline

Each task must be completed before its deadline:

$$T_i + p_i \leq d_i \quad \forall i \in \{1, 2, 3, 4, 5\}.$$

Non-overlapping

For any pair of tasks J_i and J_j with $i \neq j$, task J_j must not start within the execution interval of task J_i . This is expressed as:

$$\forall i, j \in \{1, 2, 3, 4, 5\}, i \neq j, \quad T_j \notin [T_i, T_i + p_i].$$

