RoboCupJunior Rescue (Line/Maze) 2023

Team Description Paper

Team Name

**General information for this template**

* This template contains a suggested structure for your Team Description Paper. Please look into the official rubrics posted on the official RoboCup website and the community website to see which areas of your TDP will be scored.
* This document is supposed to be between 5 and 10 **pages** long (from Abstract to Conclusion). Please **keep the formatting** (font size and type, margins, line spacing, etc.) and number figures and tables.
* Use diagrams, flow charts, etc. throughout this document to better **illustrate your work**
* Submit the TDP as a **PDF file**.

**Abstract**

* The abstract. Do not describe your RoboCupJunior Rescue sub-league in detail – concentrate on your robot, its main capabilities, and what sets it apart from the competitors.

1. **Introduction**
   1. **Team**

* Brief description of roles in your team and past experiences

1. **Project Planning**
   1. **Overall Project Plan**

* Talk about your aim for the competition
* Describe the overall project plan
* Explain your milestones
* How has analyzing the task and its constraints influenced your project plan
* How has analyzing your own past performance and/or the research into solutions by other teams influenced your development process
  1. **Integration Plan**
* Explain the structure of your system and how the different parts work together
* Support your explanations with illustrations

1. **Hardware**

* Give a high-level overview of the hardware design of your robot
* Highlight important features and talk about how everything comes together
  1. **Mechanical Design and Manufacturing**
* Go into detail on aspects such as:
  + Main Structure
  + Actuators and Power Train
  + Important subassemblies/modules, etc.
  + Rescue mechanism (Line only) / Rescue kit mechanisms
* Provide drawings and diagrams to support your explanations and reasoning for your design choices
* Explain the testing procedures you used to validate your design and present relevant testing data
* Highlight innovative and unusual solutions/approaches
  1. **Electronic Design and Manufacturing**
* Go into detail on aspects such as:
  + Sensors
  + Main controller
  + Power subsystem, etc.
* Provide drawings and diagrams to support your explanation and reasoning for your design choices
* Explain the testing procedures you used to validate your design and present relevant testing data
* Highlight innovative and unusual solutions/approaches

1. **Software**

* Don’t include the source code in this document!
  1. **General software architecture**
* Describe the general structure of your software
* Use diagrams, flowcharts, and pseudocode to illustrate your explanations
* Explain how the solutions to individual problems are integrated
  1. **Innovative solutions**
* Explain any innovative and unusual solutions/approaches you used to tackle the challenge
* Explain the testing procedures you used to validate your design and present relevant testing data

1. **Performance evaluation**

* Evaluate the performance of your robot.
* Describe the testing procedures you implemented to verify your robot’s performance
* Explain how you analyzed the test results and how they impacted your development

1. **Conclusion**

* Brief conclusion of this paper.

**Appendix (optional)**

* N.B.: The appendix is NOT to continue writing the main text. It should be reserved for additional info if the reader is interested or curious to know more. Teams may link to external documentation as an alternative to the appendix.

**References**

* References to external sources used for major parts of the development process