



RoboCup Singapore Open 2026 OnStage Judging Overview (U19)

All teams are judged in the following areas:

- Technical Demonstration Video – 20%,
- Technical Interview – 30%
- OnStage Performance – 50%

Teams must present four of their robot(s) features throughout all elements of the competition: what the team believes are their best system/sensor integration, electromechanical design, interaction, or software solutions implemented on their robot(s). For more information about how to choose the features, check the “How to Decide on Your OnStage Robotic Features” document at https://robocup-junior.github.io/onstage/resources/teams/how_to_features.html.



RCJ OnStage (U19) Scoresheet 2026

Technical Video Demonstration (20%)

Country/Region:School:Team:

Category	Examples of how high marks may be achieved are:	Mark
Robotic Demonstration and Features	<p>Demonstrate a fully working robotic system, including the four chosen features. For each feature:</p> <ul style="list-style-type: none"> ○ Demonstrate and explain what the features are and how they work with details. ○ Explain how each feature is used in the performance, including when each feature happens during the performance. ○ Explain why these features were chosen and how they add value to overall performance. 	/30
Design Process	<p>Explain how the team designed and developed the robotic system, including electromechanical, sensor, communication, software design choices, and any use of AI:</p> <ul style="list-style-type: none"> ○ Explain the entire process of robot development, including the development of the software, hardware, sensors, power etc. ○ Describe how the team overcame challenges in their design process, especially focusing on the team’s problem-solving and teamwork. ○ Explain each team member’s role and the contributions to the different parts of robot design and development (electromechanical, software, etc.) 	/30
Presentation	<p>Clarity and quality of the presentation</p> <ul style="list-style-type: none"> ○ Presents a well-polished demonstration. Graphics and accompanying materials are clearly explained and presented. ○ Using text and a graphical element to highlight the point that they are explaining in the video to focus the attention of the viewers. ○ Effectively communicates the technical capabilities of the robot to the audience concisely and clearly. ○ Technically unusual, creative, or ambitious concepts in the team’s robotic performance are clearly explained. 	/20
Innovation	<p>New and/or innovative technology (Refer to “What is innovative?” in the supplemental document)</p> <ul style="list-style-type: none"> ○ Explain any innovation through the four chosen features. Is the innovation achieved with clear evidence of testing and research? 	/20
Total Score		/100



RCJ OnStage (U19) Scoresheet 2026

Technical Interview (30%)

Country/Region:School:Team:

Category	Examples of how high marks may be achieved are, but not limited to:	Mark
Technical Skills	<p>Understanding the program and how software works, for example, by describing:</p> <ul style="list-style-type: none"> ○ The reasoning behind the chosen programming language; ○ How models, datasets, and/or libraries were created or adapted to address specific needs; ○ Strategies for writing efficient, optimized, and well-documented code, including the use of version control; 	/20
	<p>Understanding the system and how hardware works, for example by describing:</p> <ul style="list-style-type: none"> ○ Choice of materials, microcontrollers, sensors and actuators; ○ Choice of system e.g. visual/audio recognition, functional arms/hands/faces, guidance, navigation, control systems, pneumatics; ○ Development of custom electronics (including PCBs) or mechanical design; ○ Power management, regulation, and battery choices; ○ Complex mobility - omnidirectional/legged robots/balancing; ○ Stable builds, system kinematics, and design of custom components; ○ Sustainable design choices, including the choice of materials; ○ Robots can sense their environment and dynamically respond to unplanned events with appropriate actions; ○ Integration and communication between multiple sensor systems; ○ Robot-Robot and/or Human-Robot interaction design. 	/30
	<p>Difficulty of the technology and choice of technology, for example, by describing:</p> <ul style="list-style-type: none"> ○ The complexity of software and hardware design; ○ How design choices are made to ensure systems are reliable and durable; ○ High precision systems. 	/10



Engineering design process	<p>How they process their work/learning, including the iteration process that the team used to develop or improve their robotic project, for example, by describing;</p> <ul style="list-style-type: none"> ○ How did the team collaborate in the iteration process of their robot/code design? ○ How did the team overcome/solve the challenges they faced during software and hardware development together?; ○ If AI is used, how is AI involved in any part of the project development? ○ How did the team use clear evidence of calibration, testing, and debugging, research, and development in their robotic performance development? ○ The learning outcomes - what skills/competencies were gained through the project; 	/20								
Teamwork	Evidence of team collaboration e.g. works contribution, solving problems together.	/8								
Teamwork	<p>Live demonstration of the fully working four chosen features.</p> <table border="1"> <tr> <td>Feature 1:</td> <td style="text-align: right;">/3</td> </tr> <tr> <td>Feature 2:</td> <td style="text-align: right;">/3</td> </tr> <tr> <td>Feature 3:</td> <td style="text-align: right;">/3</td> </tr> <tr> <td>Feature 4:</td> <td style="text-align: right;">/3</td> </tr> </table> <p>3 - fully working without any trouble 2 - working properly with slightly trouble 1 partially working 0 - totally not working</p>	Feature 1:	/3	Feature 2:	/3	Feature 3:	/3	Feature 4:	/3	/12
Feature 1:	/3									
Feature 2:	/3									
Feature 3:	/3									
Feature 4:	/3									
Deductions <i>(At discretion of judges)</i>	Judges believe the work was not done by team members Team members are unable to explain their technical involvement with the robot									
Total Score		/100								



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Performance (50%)

Country/Region:School:Team:

Category	Examples of how high marks may be achieved are	Mark								
Visual Impact and Quality of the Whole Performance	<p>The robotic performance is engaging. For example:</p> <ul style="list-style-type: none"> ○ The theme is clearly shown throughout the performance. ○ Performance entertains and triggers an emotional response from the audience. ○ The performance area and set are used effectively. ○ Robot costumes and props add value to the performance. 	/30								
Robotic Interaction and System Integration	<ul style="list-style-type: none"> ○ The performance integrates complex or challenging movements that fit the theme and add value to the performance. ○ The team used interesting, smooth, natural interactions between robots and/or humans that add value to the performance. ○ Humans on stage never distract the audience from robot actions, and their movements enhance the overall robotic performance. ○ All robotic systems (e.g. sensors, motors) are used effectively, in multiple ways, and throughout the performance. ○ Props that are interactive and integrated fully into the performance adding value to the performance. 	/30								
Effective implementation of features presented by the team.	<p>Implementation of four chosen features: Excellent execution, visibility, and impact - features work as expected and add extensive value to the performance:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="width: 80%;">Feature 1:</td> <td style="width: 20%; text-align: center;">/10</td> </tr> <tr> <td>Feature 2:</td> <td style="text-align: center;">/10</td> </tr> <tr> <td>Feature 3:</td> <td style="text-align: center;">/10</td> </tr> <tr> <td>Feature 4:</td> <td style="text-align: center;">/10</td> </tr> </tbody> </table>	Feature 1:	/10	Feature 2:	/10	Feature 3:	/10	Feature 4:	/10	/40
Feature 1:	/10									
Feature 2:	/10									
Feature 3:	/10									
Feature 4:	/10									



Deductions: (-3 for each at the discretion of judges)	<ul style="list-style-type: none">○ -3 for each unplanned human intervention inside the marked stage area (including remote or human-controlled actions)○ -3 for each restart○ -3 every 10 seconds over the allotted time (on stage or performance) Performances that do not reach the minimum performance time will be scored zero○ If a problem is not the fault of the team, no deductions will be applied	
Total Score		/100