

# OnStage Technical Interview Score Sheet 2025

Category	Examples of how high marks may be achieved are:	Mark
<b>Programming</b>	<b>Ability to explain the program and the interactions between the hardware and software:</b> <ul style="list-style-type: none"> <li>Choice of programming language</li> <li>Difficulties with the software</li> <li>Development of appropriate models, datasets and/or libraries to solve programming solutions</li> <li>Efficient and optimized programming with clear documentation and commenting with evidence of version control</li> <li>Development of calibration, testing and debugging functionalities</li> <li>Usage of AI / AR technology</li> </ul>	/7
<b>Electro-mechanical Systems</b>	<b>Ability to explain why electromechanical design choices were made:</b> <ul style="list-style-type: none"> <li>Choice of materials, microcontrollers and actuators</li> <li>Development of custom electronics (including PCBs)</li> <li>Power management, regulation, and battery choices</li> <li>Design choices are made to ensure systems are reliable and durable</li> <li>Sustainable design choices including the choice of materials</li> </ul> <b>Explain how systems are fit for purpose - examples include:</b> <ul style="list-style-type: none"> <li>Complex mobility - omnidirectional/legged robots</li> <li>Stable builds, system kinematics and design of custom components</li> <li>High precision systems including pneumatics</li> <li>Functional arms/hands/faces</li> <li>Robotic arms for manipulation</li> <li>Automatic balance system</li> </ul>	/7
<b>Sensor and Communication Systems</b>	<b>Ability to explain the role of sensors and communication in the systems and how the robots interact with the stage environment:</b> <ul style="list-style-type: none"> <li>Robot systems can dynamically respond to unplanned events</li> <li>Robots can sense their environment and use the information to dynamically respond with an action</li> <li>Integration of multi sensor systems to develop solutions</li> <li>Development of communication between sensors</li> <li>Creation of communication architectures (asymmetric communication)</li> </ul> <b>Explain how systems are fit for purpose - examples include:</b> <ul style="list-style-type: none"> <li>Visual/Audio recognition</li> <li>Developed guidance, navigation, and control systems</li> <li>Robot-Robot and/or [underline]Natural Robot-Human interaction</li> <li>Stage/Robot localization systems</li> </ul>	/7
<b>Innovation and Feature Development</b>	<b>Ability to explain and showcase innovative features or robotic components</b> <ul style="list-style-type: none"> <li>Innovation achieved with clear evidence of testing, research and development. Innovations that can inspire future competitors</li> <li>Teams are able to explain developments based on past feedback and performance results</li> </ul>	/6
<b>Teamwork and Collegiality</b>	Evidence of team collaboration, problem solving and spirit in the performance and competition.	/3
<b>Deductions (At discretion of judges up to -15)</b>	Judges believe the work was not done by team members Team members are unable to explain their technical involvement with the robot	
<b>Total Score</b>		<b>/30</b>