

OnStage Technical Interview Score Sheet 2025

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