

The background information of experts is shown as Table 1.

Table 1 - The background information of experts.

Experts number	Background description
Expert 1	Robotic engineer specializing in the design and development of collaborative robots, with 12 years of experience.
Expert 2	Professor of human-machine interaction, with research areas including human-machine interfaces and user experience design, with 15 years of research and teaching experience.
Expert 3	Industrial automation systems consultant, specializing in integrating robotic systems into production lines, with 20 years of industry experience.
Expert 4	Safety standards expert, specializing in safety compliance for robots and automation equipment, with 10 years of experience.
Expert 5	Artificial intelligence researcher, specializing in algorithm development, particularly in machine learning applications in robotics, with 13 years of experience.
Expert 6	Mechanical design engineer, specializing in robot dynamics and mechanism design, with 15 years of work experience.
Expert 7	Production management expert, focusing on improving production efficiency and introducing new technologies, including robotics, with 18 years of experience.
Expert 8	Professor of computer vision, specializing in applications of computer vision in robotics, with 10 years of relevant experience.
Expert 9	Enterprise strategy consultant, specializing in helping manufacturing companies implement technological upgrades, including robotics and automation, with 20 years of experience.
Expert 10	Professor of robot kinematics, specializing in kinematic problems of various types of robotic systems, with 15 years of experience.