Hard Mission Robot

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In the past decades, robots have become increasingly common in different human activities. From pharaonic tombs to gold mines, a new generation of robots are designed to reach harsh areas that humans cannot access easily. A multi-tasking robot is typically designed to perform difficult tasks without endangering people’s life. The robot is designed in the form of a cart; remotely controlled with Arduino through a mobile application. It consists of a special wheel and four arms to move easily on rugged places, and move up and down the stairs. The robot is also equipped with a photo-transfer camera, an array of sensors, and other high-tech gadgets to assess its surroundings. For every task, a specific gadget—such as grabbers, clippers and metal detectors—is fitted to perform the required mission accurately. The robot was tested in a cave and was able to determine the ratio of oxygen and toxic gases, measure the dimensions of the cave, and the temperature inside. Its movement was easy and smooth, and the mission was accomplished successfully. This robot represents a new technological challenge and is expected to greatly contribute in reducing human casualties in archaeological exploration sites, gold and coal mining activities, and mines sweeping missions.

Awards Won: