

Robot Walking School Bus following painted lines

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Children today have less freedom to move around outdoors in comparison to previous generations. Anecdotally, this behaviour change is associated with the perceived risks associated with hazards such as street crime and high speed vehicular traffic. As a result of a sedentary lifestyle, children are becoming less healthy – both physically and mentally.

In the near future, the development of self-driving vehicles may help to alleviate traffic congestion, but it is uncertain if these vehicles will encourage more students to walk and ride to school.

Students from the Mill Park Library Makers Club have developed a Robot Walking School Bus to guide students safely to and from school. The Robot is designed to follow a painted line on the footpath. The Robot can also help students collect street litter and transport organic waste from home to school for composting.

This Robot was designed, built and coded by school students and represents a unique student-led approach to infrastructure development for local government. As a consequence, the ideas and concerns of children are more fully integrated in this project, based on their perception of key sustainability and inclusivity issues.

Unlike other self-driving vehicles, this robot aims to use footpath infrastructure rather than roads. The original inspiration for the Robot was based on a line-following battery powered train in China.

By involving students more directly in infrastructure projects it is hoped that new visions for smart and sustainable cities can emerge that better represent the aspirations of our youth.