The SoundBytes and The Robot Orchestra

Initiative

The University of Manchester Robot Orchestra was created in 2016 to celebrate Manchester becoming the European City of Science. The aim of the orchestra is to create a technology-based project to demonstrate a range of different engineering skills in a way that is accessible to a broad audience, which hopefully inspires more young people to pursue a career in the technical sciences. The instruments in the orchestra have predominantly been made by primary and secondary school students as well as university students. This MEng project was motivated by the rising public and industrial interest in the existing Robot Orchestra which, combined with the new core, will benefit from increased usability, flexibility and reliability, showcasing industrial-standard equipment in an exciting non-traditional way. The team developed four new instruments and a new electronic conductor, which allows the orchestra to play a wide variety of songs. The new instruments include a keyboard, an electronic xylophone, a miniature tesla coil and an instrument made of four stepper motors! All the instruments have been designed to be easy to transport and assemble, allowing the orchestra to be showcased across the country!

Without these developments the future of the orchestra would have been severely limited, the success of this project gives the orchestra the ability to easily add new instruments to the already existing ones and play large library of songs. This ensures it shall continue to expand and inspire for the foreseeable future.

How the SoundBytes Team has made a difference

The team went above and beyond during their project this year. As well as successfully delivering the project and achieving a first class mark, the orchestra was showcased at different STEM events. The team attended the Faraday challenge, where the orchestra was demonstrated to a class of Year 8 students, and to the Museum of Science and Industry’s Makefest 2018! The orchestra was very well received at both events, creating lots of engagement and inspiring young people to pursue a career in the technical sciences!