# RoboBall

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RoboBall aims to respond to the lack of high quality training facilities and coaching that regional soccer players have access to; the impact of these inequities between regional and metro players evident through the vast majority of players at the elite level stemming from metropolitan areas. A significant number of methods were used to compose a robot that would be able to adequately and feasibly address these challenges faced by regional players. The arm intake and distribution was controlled by both pneumatic controls and electronic motors. Whilst originally electronic motors were considered for both the arm elevation and wheels, testing and experimentation showed that this decreased the robot's battery life and it was unable to last for a full training session. Discussions were had with experts in the robotics field and it was decided that pneumatics would be the most appropriate option to raise and elevate the arm instead, as it was an efficient system that allowed for set arm heights and was easily programmable. Whilst pneumatics could potentially have been problematic as I had no previous experience with utilizing c++ to code for pneumatic systems, reading of textbooks, combined with discussions with the school robotics team, gave me insight and instruction into how to use c++ to program for pneumatics. Whilst increasing the level of automation within the robot has the capacity to reduce the inequities further; the product was deemed by multiple players to have been able to provide a holistic training experience.

**Awards Won:**

Third Award of $1,000