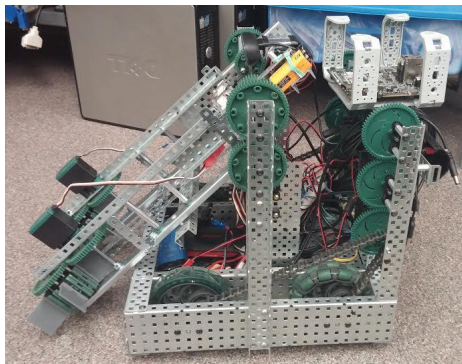
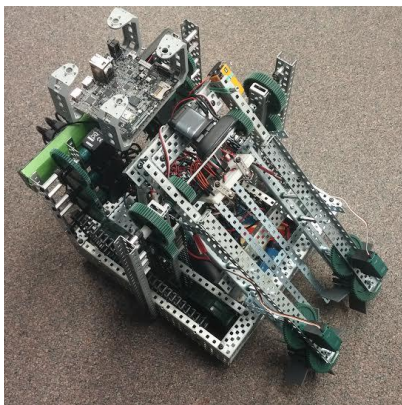


Picture

Side view



Top view



Credits

Project designed by Group #4:

Kevin Albertson

Edward Choi

Sewon Chung

Matthew Reyes

Pawel Szczurko

Timothy Yong

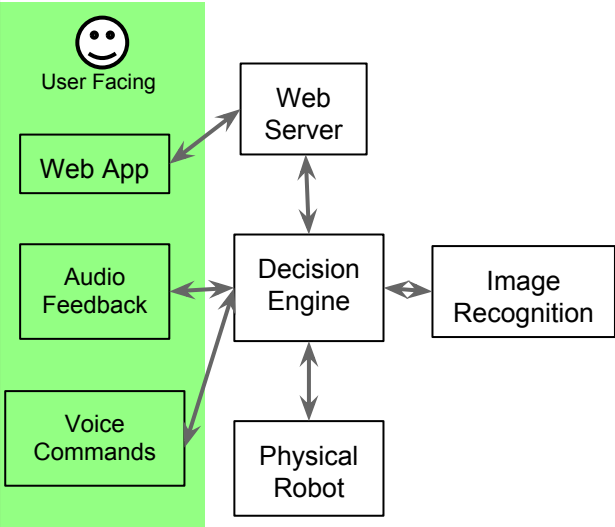
Site: <http://sevatbr-v002.appspot.com>

Tennis Assistant

Tennis Assistant is a fully automated robot able to retrieve and return stray tennis balls on a tennis court.

Tennis Assistant liberates you from the mundane task of fetching tennis balls and let's you focus on the game.

As you break from the game and refresh, Tennis Assistant seamlessly works on the court stays out of your way during play.

Features	Features	Diagram
<p>Ball and Basket Recognition</p> <p>Tennis Assistant is capable of detecting both tennis balls and baskets within its field of vision through the help of sophisticated image recognition technology.</p> <p>Voice Activation</p> <p><u>Initiate Retrieval</u></p> <p>Tennis Assistant supports ‘go’ and ‘fetch’ commands that instruct to either ‘go’ get one ball or ‘fetch’ all tennis balls.</p> <p><u>Abort Retrieval</u></p> <p>Tennis Assistant is also capable to abort its current action no matter what it is doing. Just issue a ‘stop’ command and Tennis Assistant will promptly stop the current action that it was doing.</p>	<p>Remote Control</p> <p>Tennis Assistant can be controlled by a remote web application which is mobile-friendly. It makes it simple to move Tennis Assistant between multiple courts.</p> <p>Audio Command Confirmation</p> <p>Tennis Assistant let's you know when it's received commands by speaking back to you. For example, once you send Tennis Assistant the command to fetch a ball, it will say "Fetching Ball" to confirm.</p> <p>Activity Monitoring</p> <p>Tennis Assistant monitors when it is commanded to pick up tennis balls and return to the basket. This way, managers are able to see how often players are requesting use of Tennis Assistant, and strategically place Tennis Assistants to courts with more frequent players.</p>	 <pre> graph TD subgraph UserFacing [User Facing] WA[Web App] AF[Audio Feedback] VC[Voice Commands] end WS[Web Server] DE[Decision Engine] PR[Physical Robot] IR[Image Recognition] WA <--> WS WS <--> DE DE <--> PR DE <--> IR AF <--> DE VC <--> DE </pre> <p>Our system (depicted above) hides all of the sophisticated internals and provides an easy-to-use mobile-friendly web application.</p> <p>Tennis Assistant communicates to you by talking, and also can understand voice commands!</p>