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Charging Station and Automated Docking for Tangobots

As the size and number of motorized robots under the Computer Science Department increases, so does the time and manpower required to maintain the robots. The purpose of this project is to design and build a prototype charging station for Tangobots, the newest generation of robots being introduced to the Computer Science Department. This will enable the Tangobots to charge themselves, saving significant manual effort by operators. Currently the only way to charge the Tangobots is to manually charge each battery independently after removal from the device. In this project we will design and create a charging station that is easily mounted by the Tangobots. We will also create an API that will be implemented by the Tangobots, which will monitor the current battery level and determine when to navigate to a charging station, dock with a charging station, and charge its battery with little to no user assistance.

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