Opportunity and Significance
Cheaper and more efficient methods of assorting objects is necessary to maintain a high level of production for its large consumer base. The project allows us to develop a dispensary that can distribute the desired candy in an optimal way and learn to solve issues in development.

Technical Objectives
• User choice of candy quantity and color
• Recycling of skittles rejected
• Optimal packaging
• How to improve accuracy of individual skittle assortment?
• Where to place desired and rejected skittles?

Technical Approach, Accomplishments and Results
User provides the input onto the keypad with keys registered under a predetermined variable matrix using ACII characters. Input then activates individual loops.

Before acceptance or rejection, the loop will activate the servo motor to rotate from initial 0 degree to 90 degree to be read from by the TCS2300 color sensor..

If the skittle is accepted or rejected, the servo will rotate to either 7V 1A Uxcell actuator will activate, pushing the desired skittle to its proper location.

Next Steps for Development and Test
The project has potential to be applied on a bigger scale in different areas such as city infrastructure, where bikes can be assorted in a similar fashion as the skittles. Also, in medical fields, where pills and tablets can substitute for the skittles being assorted for sickly persons.

Commercialization Plan & Partners
Main persons involved were the students and professor named in the title.

We wish to work with Mars, Inc. in order to introduce new ideas in the manufacturing processes.

Initial contact must be made with their Design and Release department. The company is private so it may be easier to gain an audience with their manufacturing since the chain of command is small.

Related Work and State of Practice
Previous work by WSU students assorted skittles into individual buckets depending on color using a servo motor and color sensor. The design consisted of dropping skittles vertically through a pipe. Initial planning drew inspiration from this project, during the predesign stage.

Current practice of assortment of goods or products can be found at any factory or plant. A demand for finding faster and productive output is high in electronics, food, and other industries.

References