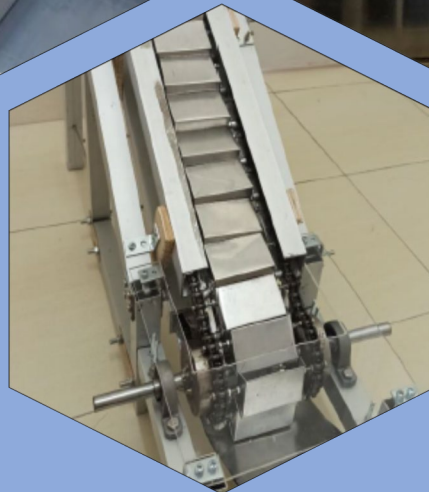


# PROTOTYPE DESIGN COLLECTION

## SERIES 1



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## CHAPTER 2

### **Design, Analysis and Fabrication of Semi-automated Potato Peeler Machine**

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#### **PROJECT DESCRIPTION**

Nowadays, people like to waste their time and manpower to do simple chores even though many automatic machines have been invented. For example, peeling potatoes, people mostly love to peel with knives rather than using automatic machines. However, peeling potatoes is a critical unit procedure in the potato processing industry. As a result, a semi-automated potato peeler and slicer machine was designed and created. Then, a semi-automatic potato peeler machine will be created for small-scale/household use. In terms of my project, I proceeded with the main body first for my fabrication process to estimate the overall size of the project, followed by the creation of the peeler blade to peel the potato. The soldering, cutting, drilling, and measuring processes are all part of the project's fabrication. The major goals of this research were to improve current mechanical peeling methods and develop innovative mechanical ways for skinned vegetables that are near to "ideal" peeling circumstances using mechanical characteristics of the product. The machine's accuracy was evaluated using three locally grown potato varieties of different sizes: size A, size B, and size C. The peeling process was recreated in a mathematical model, and the main influencing factors were found. The parameters are either connected to the product or to the peeler. These parameters manifested themselves as coefficients in a linear regression model.

**Keywords:** *potato peeler, slicer*

#### **PROTOTYPE**



### DESIGN PARAMETER

