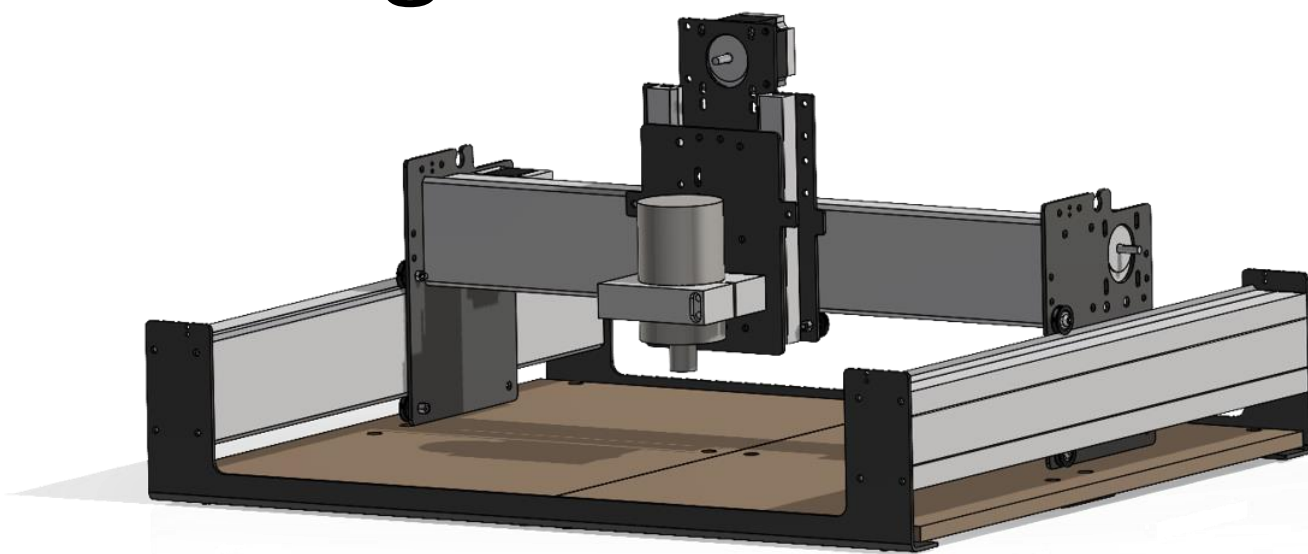


# Safeguarding CNC Router

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## Objective

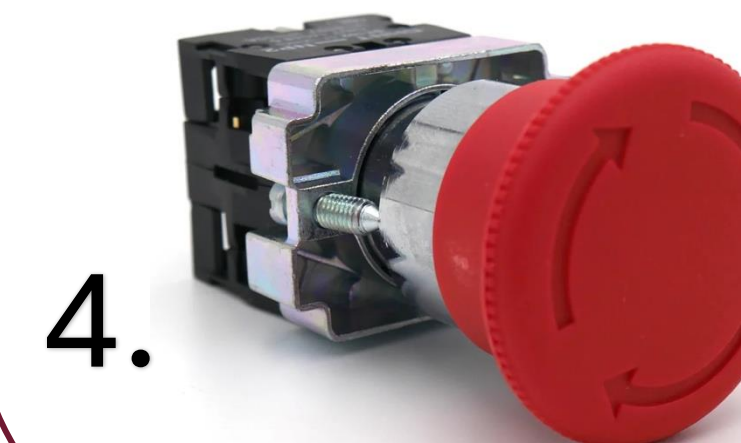
- Manage safety concerns
- Increase the safety of the user while the machine is running
- Mitigate concerns of user not wearing PPE



## Background

- CNC Router: Cuts/carves shapes into various materials via a rotating cutting tool.
- Method of precise machining using computers to control the cutting of material.

## Implemented Safety Functions



1. Enclosure

2. Dust Collector/Separator

3. Automatic Shutoff

4. Emergency Shutoff



## Concept Selection Characteristics

- Impact force on walls
- Clearance for appendages and dust particles
- Limited access to the machine while running
- Disassembly time for maintenance and maneuverability
- Displacement due to vibration

## Hazards



*Moving Parts*



*Projectiles*



*Impalement*



*Dust & Particulates*

## Final Design

