

## **Title: Food Safety Engineering Researcher**

### **Overview:**

Since the flesh will be used to make food, we must prioritize food safety!

### **Responsibilities:**

- **Food Safety Research:** Investigate and identify the best materials for parts that will be in contact with the fruit, ensuring compliance with food safety standards. Contact material manufacturers to obtain certificates of compliance and assess the importance and validity of these certifications if needed.
- **Material and Manufacturing Methods:** Explore various manufacturing methods, including resin coating for 3D prints, moulding, and machining, to assess their durability and suitability for food safety. Research the longevity and effectiveness of these materials and techniques. Work closely with the project lead and Keenan.
- **Food Safety Assurance:** Ensure all parts and materials meet food safety requirements. This may involve using separate, cleaner printers for specific parts and materials and ensuring safe storage and handling of these parts to maintain compliance with food safety standards.

### **Helpful Resources to get some idea:**

- [About Food Safe 3D Printing \(YouTube\)](#)
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## **Title: Mechanical Design Engineer**

### **Responsibilities:**

- **Vibrating Plate Design:** Develop a vibrating plate mechanism to efficiently push fruits for deseeding, ensuring the design is both functional and reliable. Most important part is to limit the vibration only to the plate. Improve the design to handle large quantities of fruit to minimize the need for frequent refilling.
  - **Manufacturing Optimization:** Simplify the design to make it easier and more cost-effective to manufacture. Consider various manufacturing methods and materials to achieve optimal performance and efficiency.
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## **Title: Mechanical Systems Engineer**

**Note:** I will be working on this part. If anyone is interested, you are welcome to collaborate with me 😊 (only one more person).

### **Responsibilities:**

- **System Analysis:** Calculate the torque and limitations of the system to ensure optimal performance and reliability. Identify potential issues and develop solutions to overcome them.
- **Design Optimization:** Simplify the design to make it easier to manufacture without compromising on performance. Implement design improvements based on system analysis and testing results. Emphasis on efficiency.
- **Rod Size Selection:** Determine the perfect rod sizes for the system to achieve efficient seed removal. Conduct research on different types of rods and materials, and test and evaluate various options to find the most effective configuration.