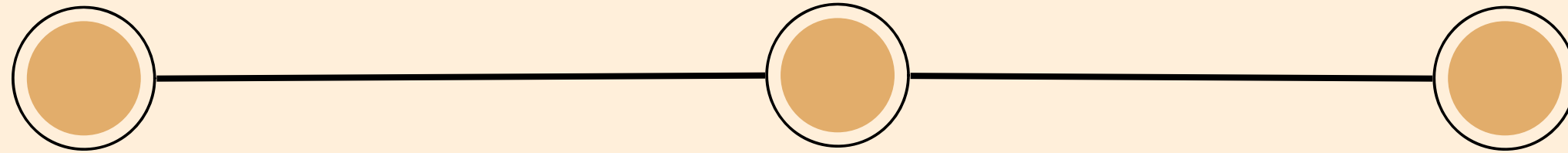




MASA YASEEN & HALA ATOUT
DR. LUAI MALHIS

WHY GRANOMATIC?

SAFETY

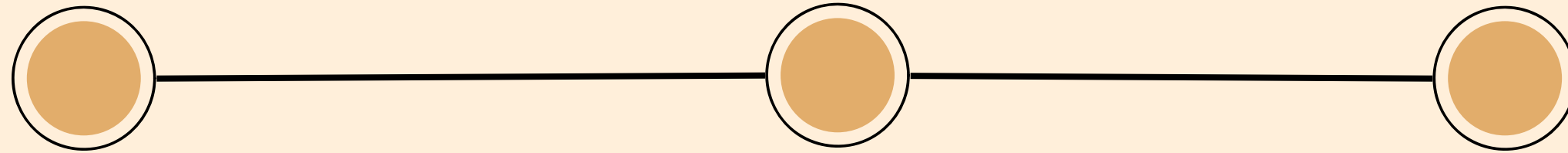


AUTOMATION

CUSTOMIZATION

WHY GRANOMATIC?

CLEAN



ALL-IN-ONE SYSTEM

MOBILE CONTROL

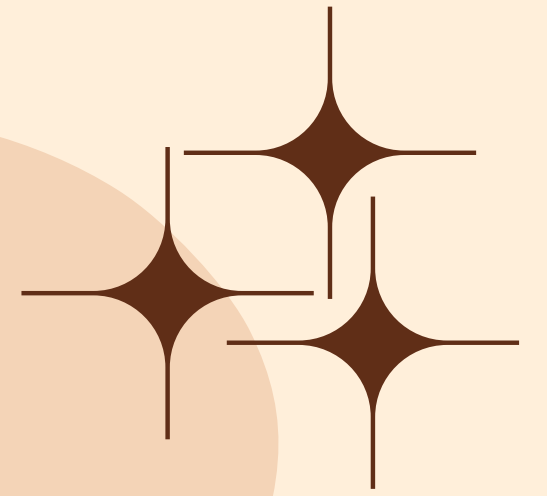
USER-FRIENDLY

GRANOMATIC?

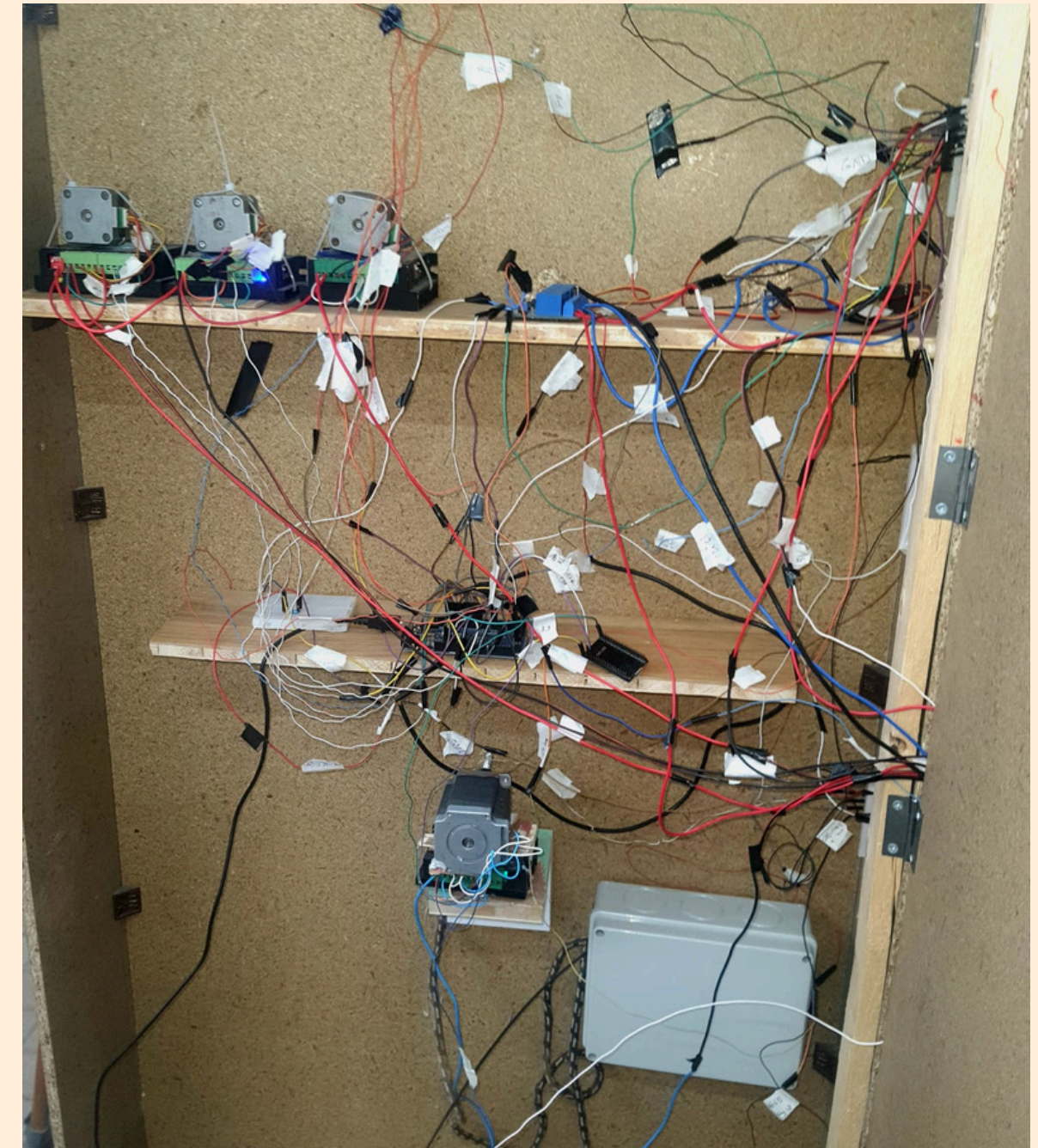
Granomatic is a smart production line for making granola in an easy and automatic way.

It uses modern technology to save time and improve the process.

Granomatic makes granola production faster, cleaner, and more organized, with good quality every time.



GRANOMATIC STRUCTURE



FEATURES

**1. INGREDIENT
DROPPING**

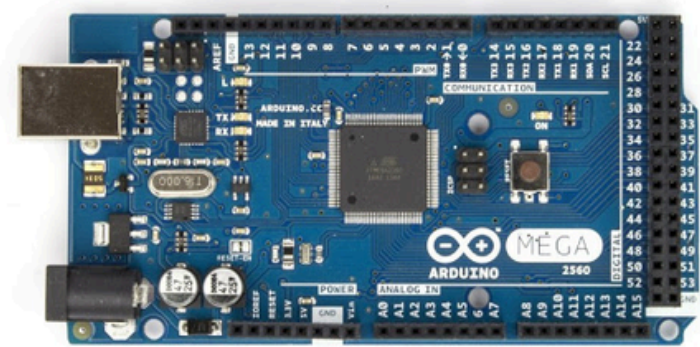
2. OIL ADDING

**3. MIXING &
ROASTING**

**4. AUTO
EMPTYING**

**5. MOBILE
WEBSITE
CONTROL**

MICROPROCESSORS & MAIN COMPONENTS



Arduino Mega2560



ESP32 Dev Module



PC power supply

INGREDIENT DROPPING



INGREDIENT DROPPING



Ultrasonic sensor



INGREDIENT DROPPING



Servo Motors



OIL ADDING



Water Pump



Water Valve



Relays



Power adapter

OIL ADDING



MIXING & ROASTING



Relays



**DC Brushless Gear
Motor**



**DS18B20
Temperature Sensor**

MIXING & ROASTING



Power adapter



AUTO EMPTYING



**NEMA 32 Stepper
Motor**



Microstep Driver



START PAGE

MOBILE WEBSITE CONTROL



Welcome to
Granomatic!

Tap to start your delicious
adventure

Start

Data

Granola time!

Choose your favorite ingredients!

OATS

CASHEWS

ALMOND & WALNUT

SUGAR

COCONUT

COCOA

FLAXSEEDS

SUNFLOWER OIL

Done

Back to Home

INGREDIENTS SELECTION
PAGE

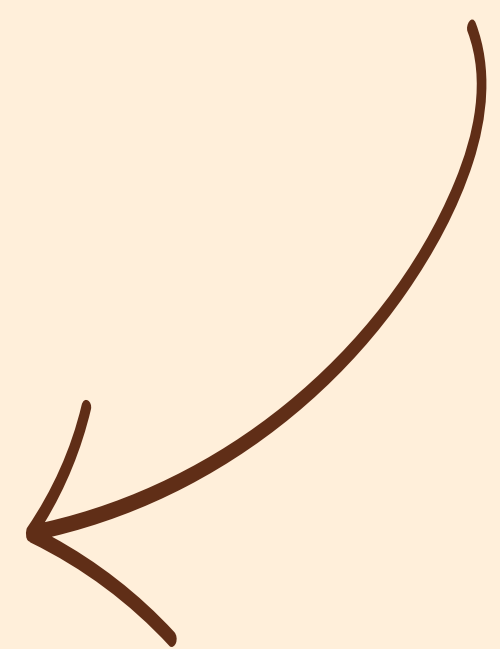
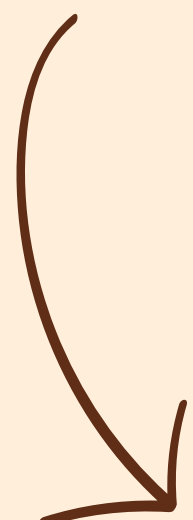
ROASTING PROCESS
PAGE

MOBILE WEBSITE CONTROL

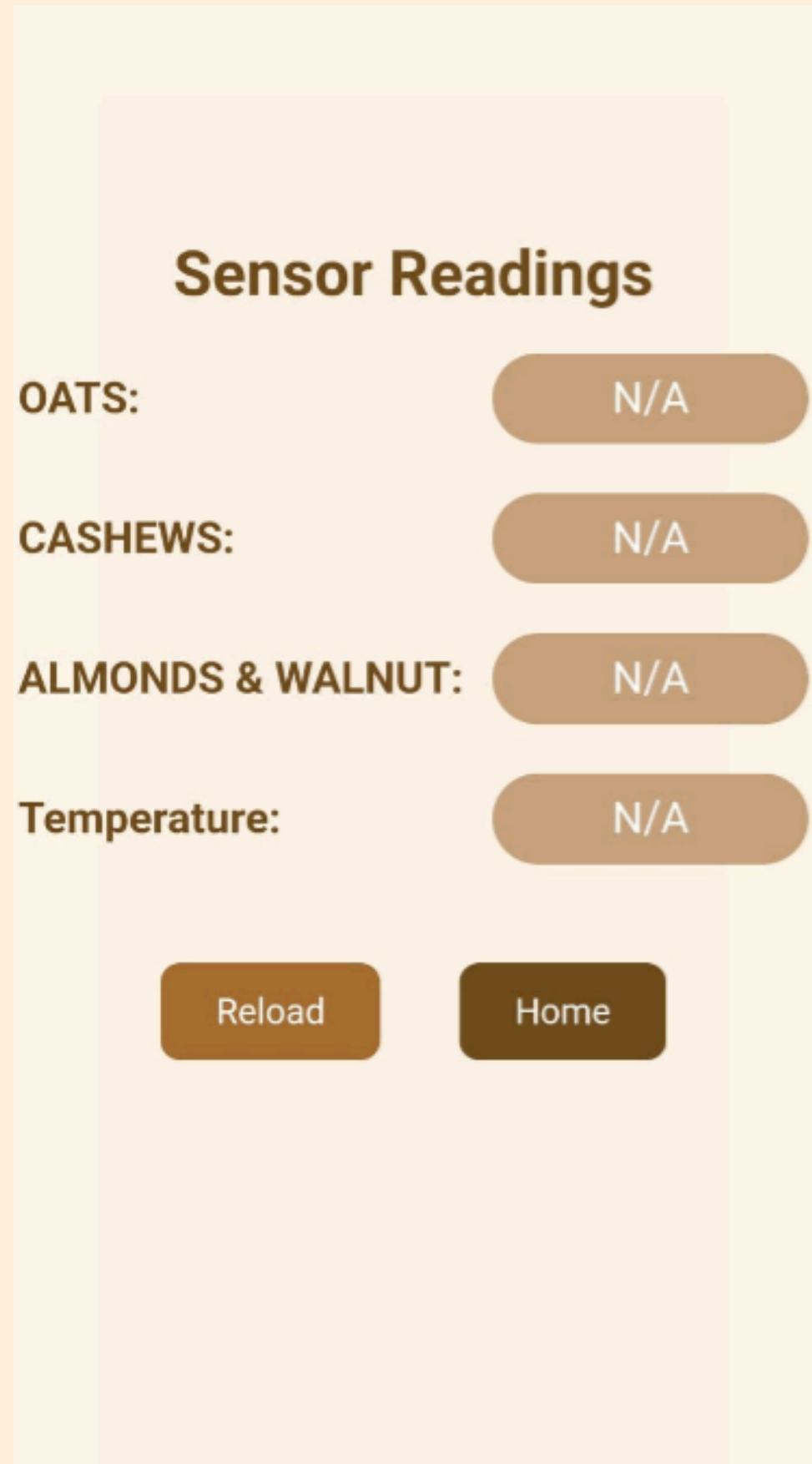


Crunch time!
Your granola is ready to shine!

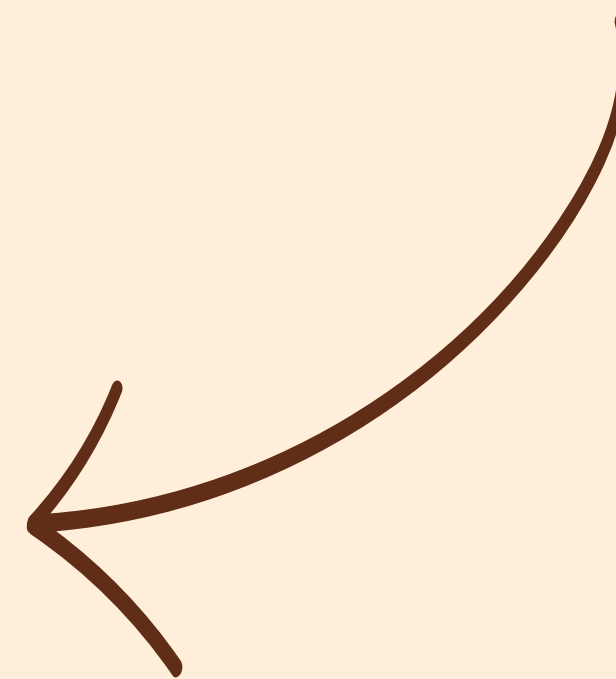
GRANOLA READY PAGE



MOBILE WEBSITE CONTROL



SYSTEM READINGS PAGE



CONSTRAINTS AND LIMITATIONS

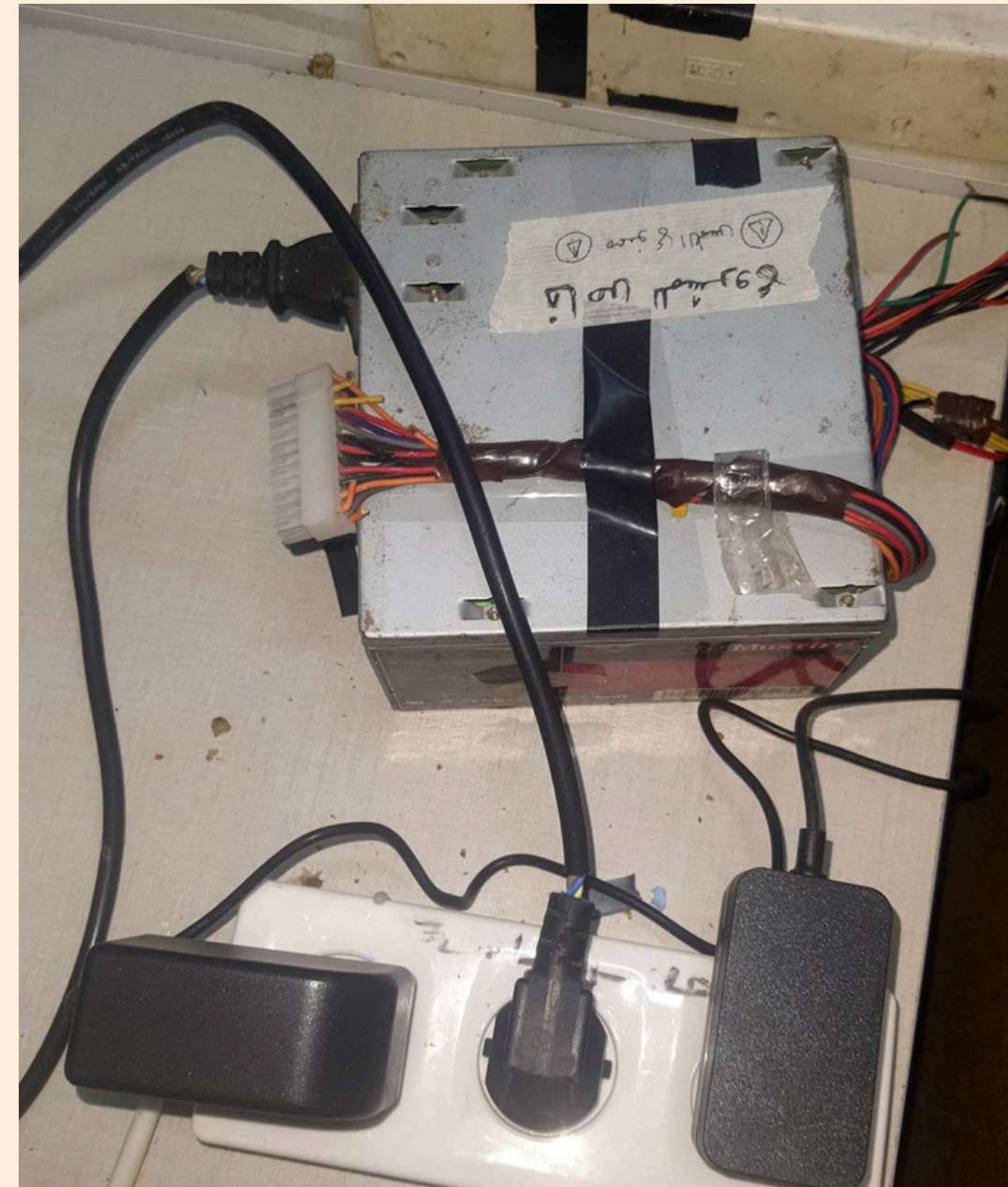
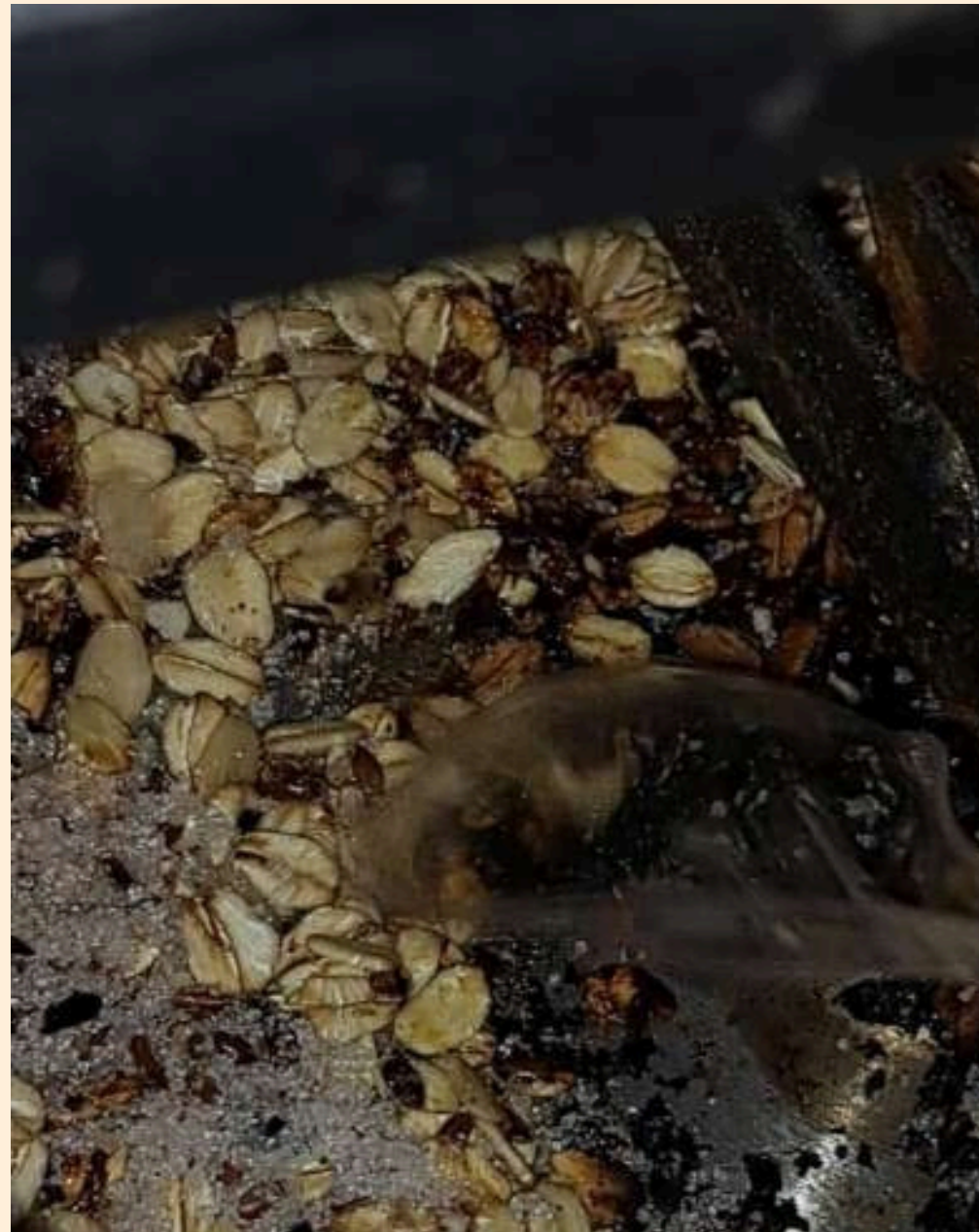
GRANOLA BURNED
DUE TO HIGH HEAT

INGREDIENT SIZE
CAUSED
DROP ISSUES

SHARED POWER
CAUSED ISSUES

OIL AMOUNT HARD
TO CONTROL

CONSTRAINTS AND LIMITATIONS



FUTURE WORK

- Add auto-filling for oats, nuts, and flavors
- Let users choose product weight and size
- Make weight more accurate using sensors
- Use AI to control and improve the process
- Add packing system to finish the product faster

THANK
YOU

