# FilaMentals

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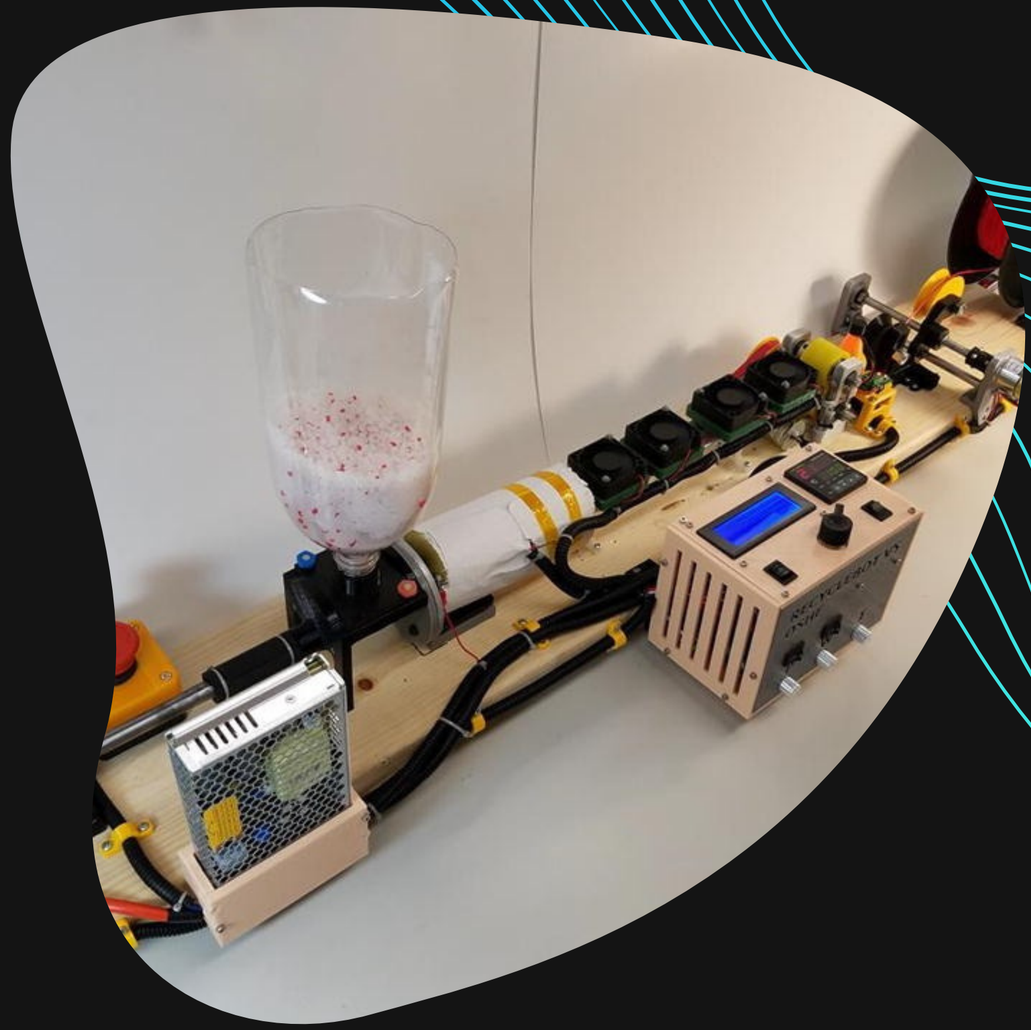
# Overview

- THE PROJECT
- MOTIVATION
- BENEFITS
- A NEW OPEN SOURCE WAY
- FIRST STEPS

# The Project

## HOW WE GOT HERE



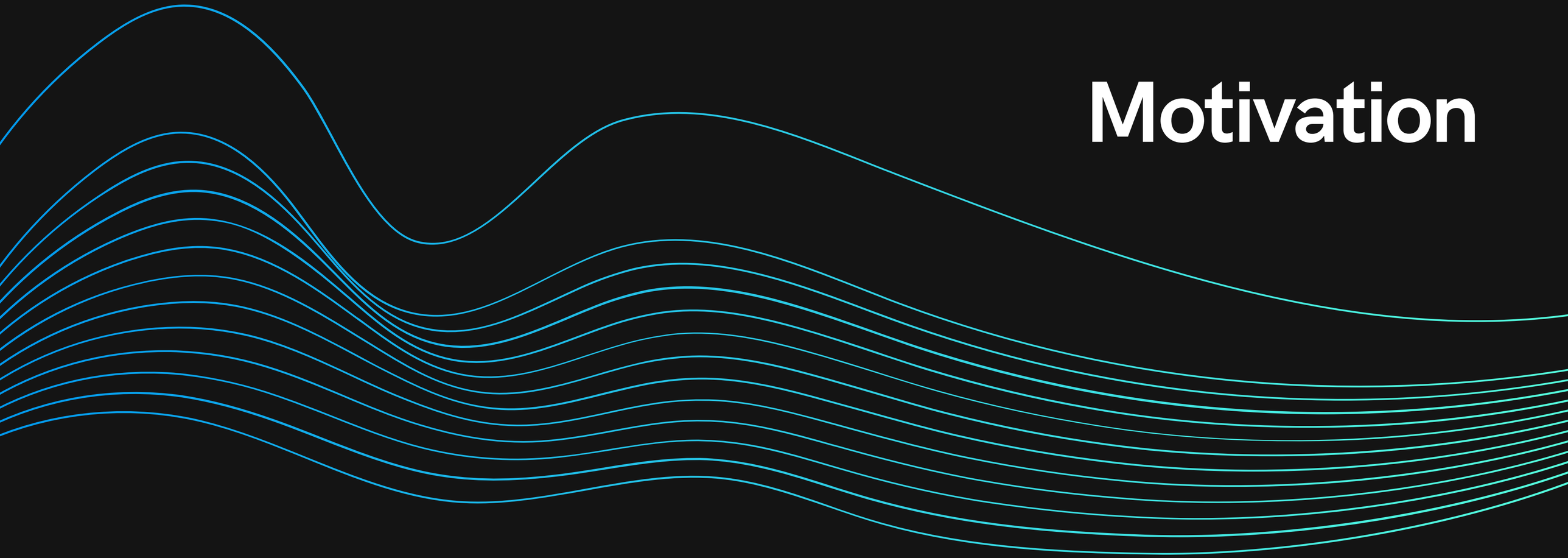
### ORIGINAL IDEA

RepRapable Recyclebot took waste plastic and used filament and re-extruded them to be once again used by a 3D printer.

### OUR CONTRIBUTION

A monitoring system for the recycling extruder.

# Motivation



## PAST

Construct the full recycling extruder based off of the "wow" factor of 3D printing.

## PRESENT

Downscale project to monitoring system due to time and cost.

## FUTURE

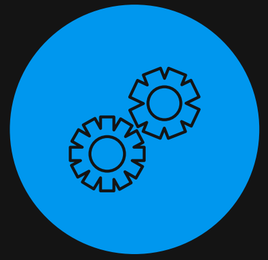
Optimization of monitoring system: feed corrective data back into the system (feedback loop).

# Benefits

Gives Life to Extruder

Low Cost Alternative

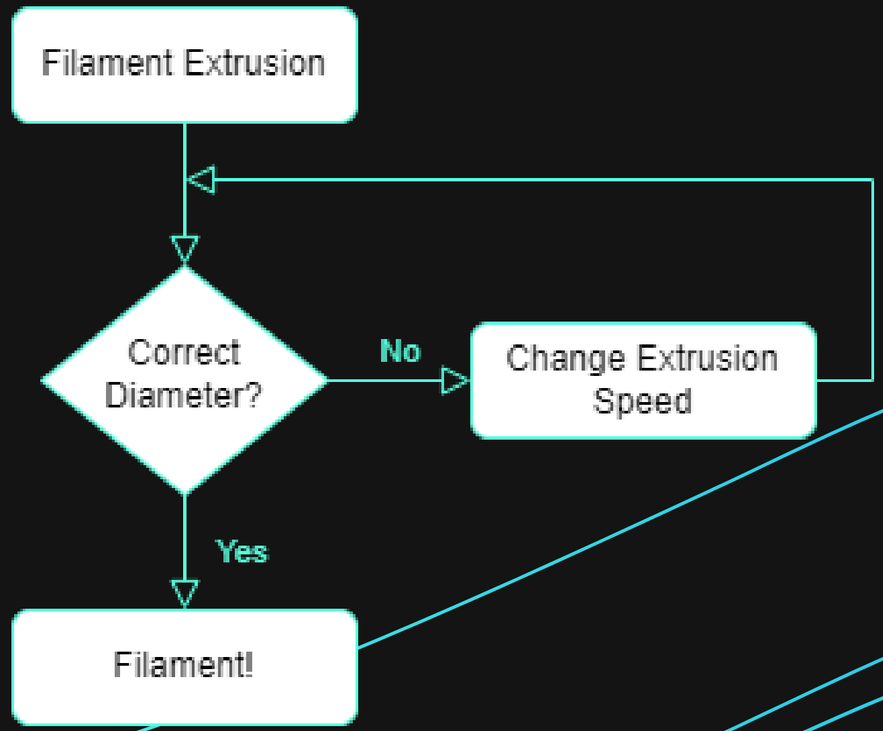
Giving Back to the Community



Learning Opportunity

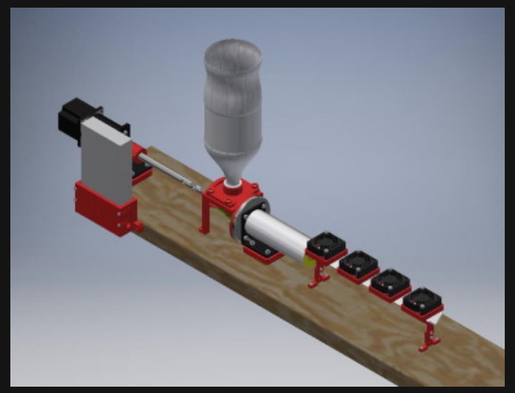
# A New Open Source Way

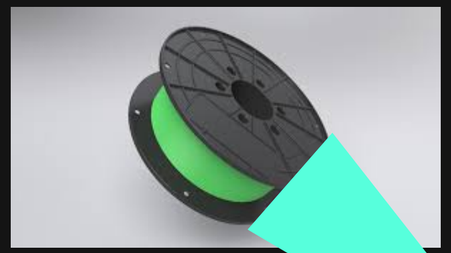
## THEORY OF OPERATION

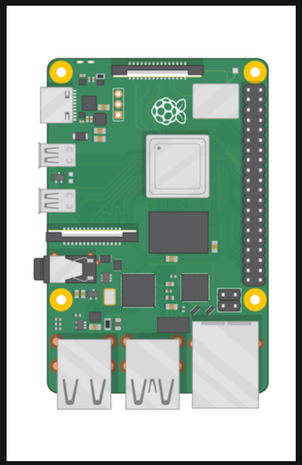


# A New Open Source Way

## HARDWARE

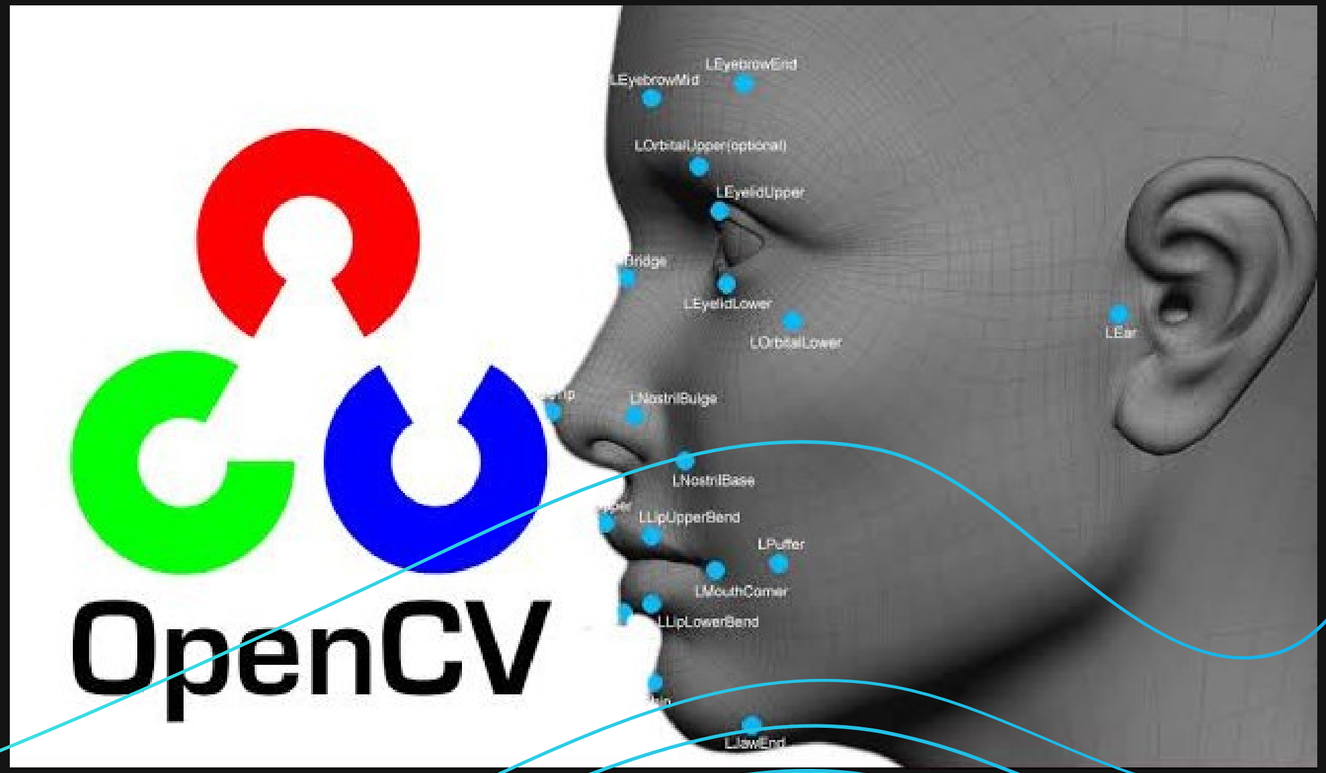






# A New Open Source Way

## SOFTWARE



# First Steps

- Testing the Extruder
- Getting the Raspberry Pi working and starting on the detection algorithm
- Creating a 3D model for a camera mount