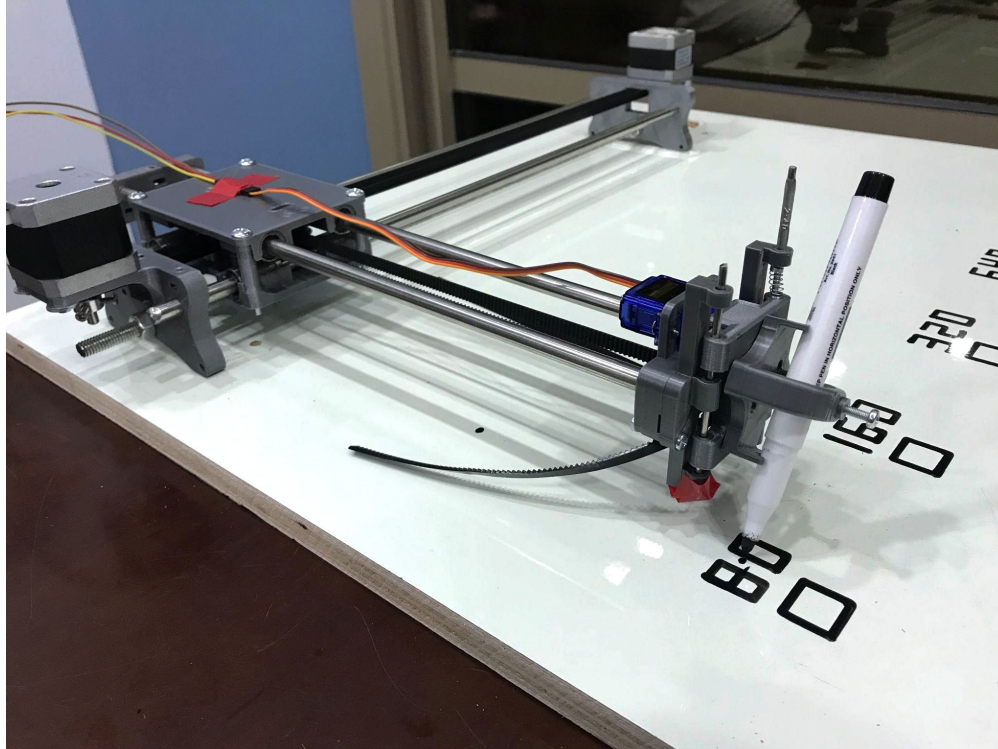


Image Visualizing Pen Plotter

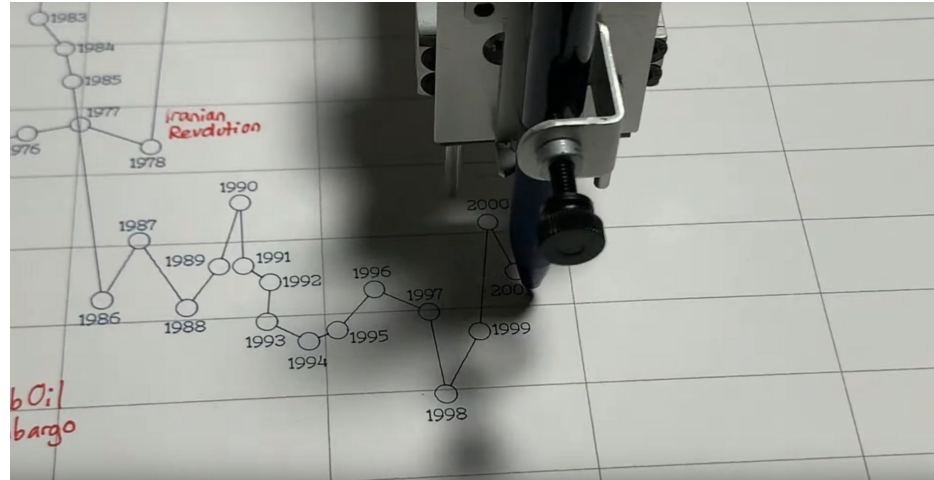


CNC and Pen Plotters



**Computer Numerical Controlled
Machines**

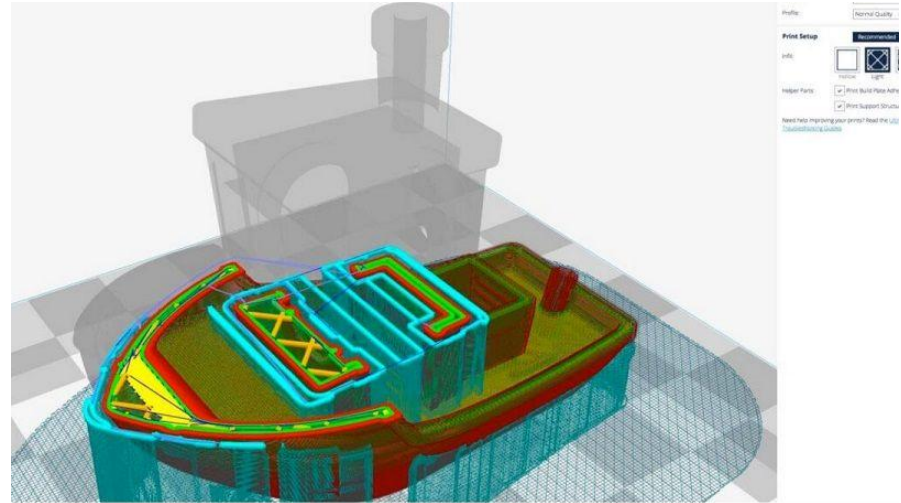
Pen Plotters are a "specimen" of
CNC machines



G-Code Software

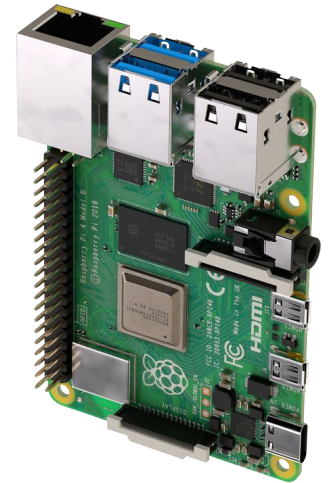
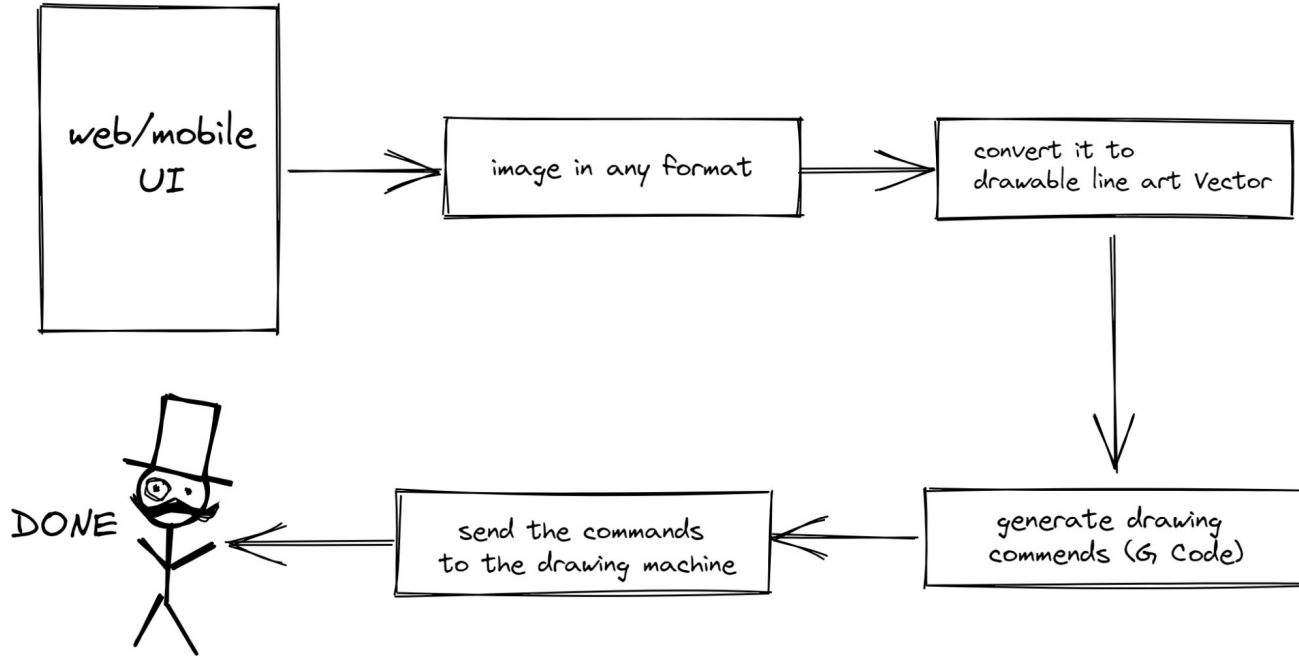
G93
G21
G91Z0F80
G91X0.5F80
G91Y0.5F80
G91X-0.5F80
G91Y-0.5F80
G91Z1F80
...

G-Code



Ultimaker Cura

Processing pipeline



React UI

Image Visualizing Pen Plotter

1 Choose Your Image

UPLOAD FILE

selected file is :

CONTINUE

BACK

2 Crop Your Image

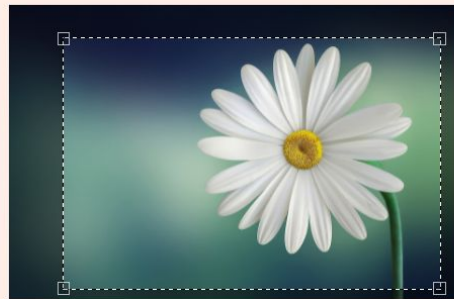
3 Convert It Into Line Art

4 Draw It !

Last step

✓ Choose Your Image

2 Crop Your Image



CONTINUE

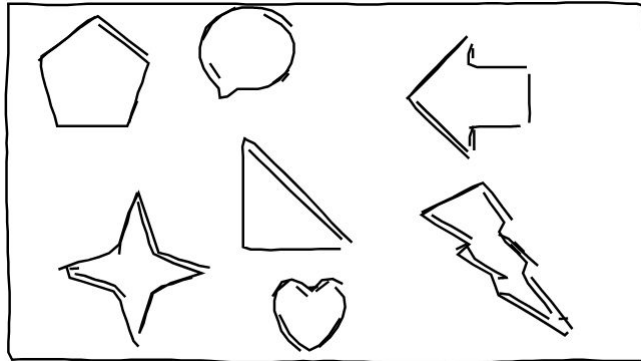
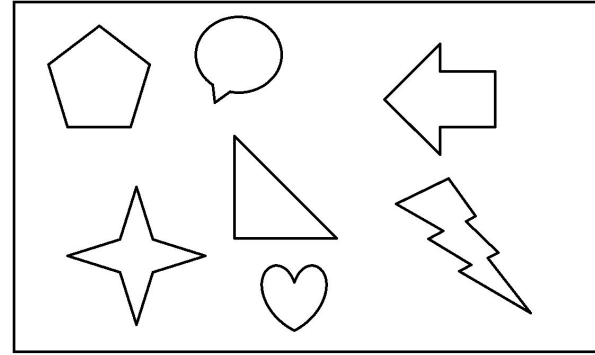
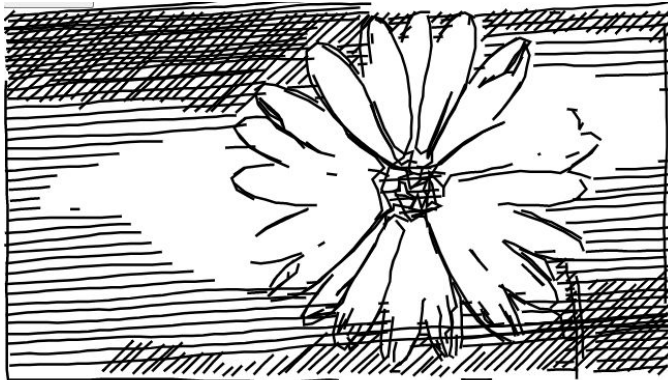
BACK

3 Convert It Into Line Art

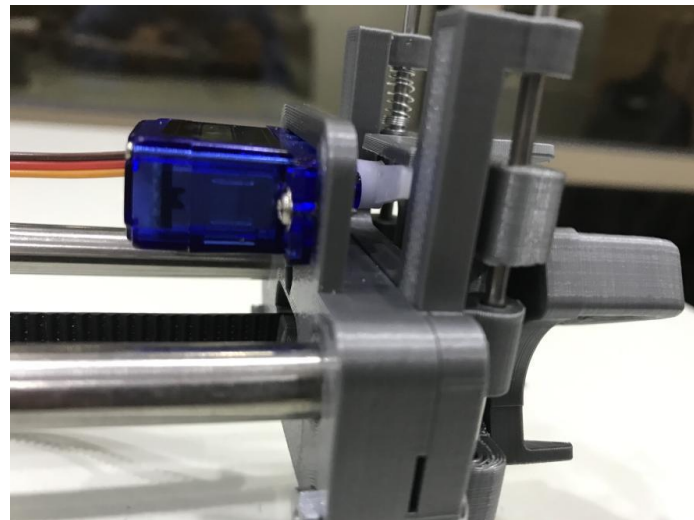
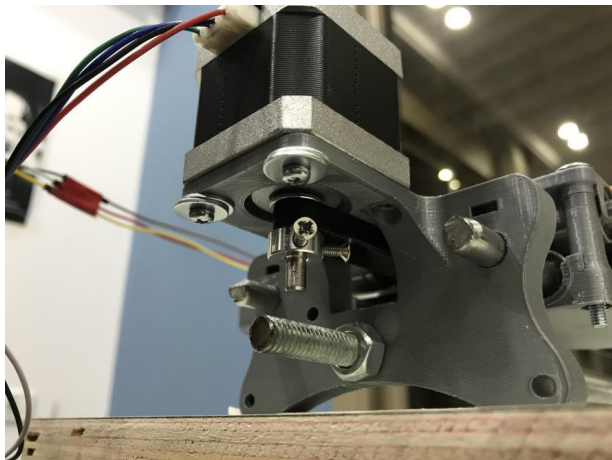
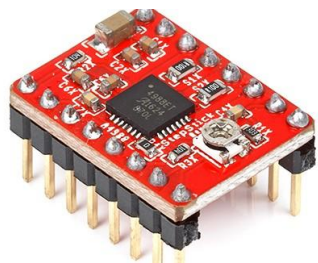
4 Draw It !

Last step

Line Art



Plotter



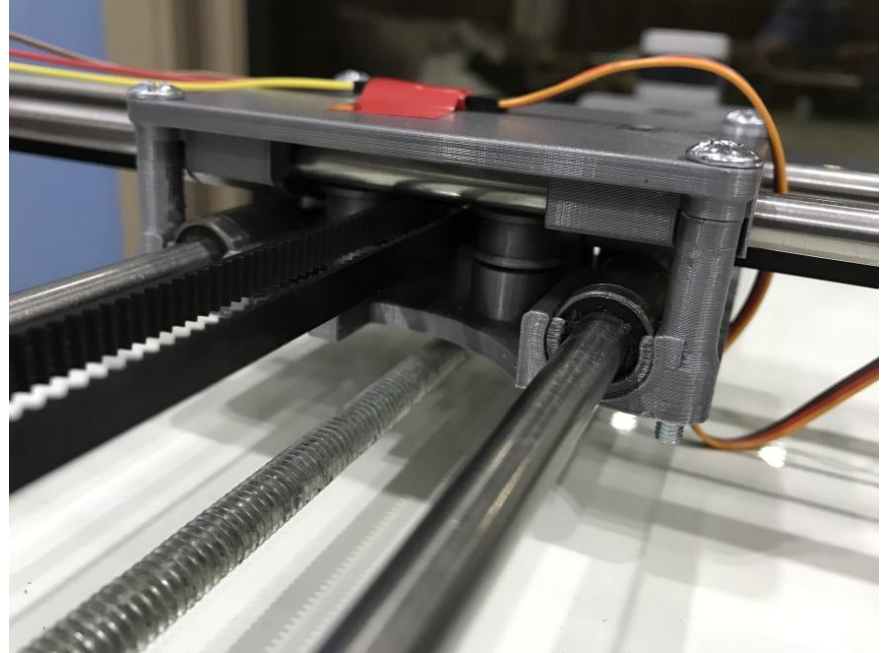
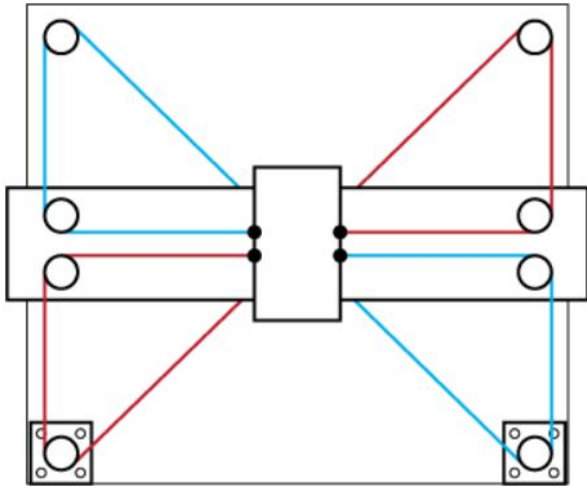
GRBL



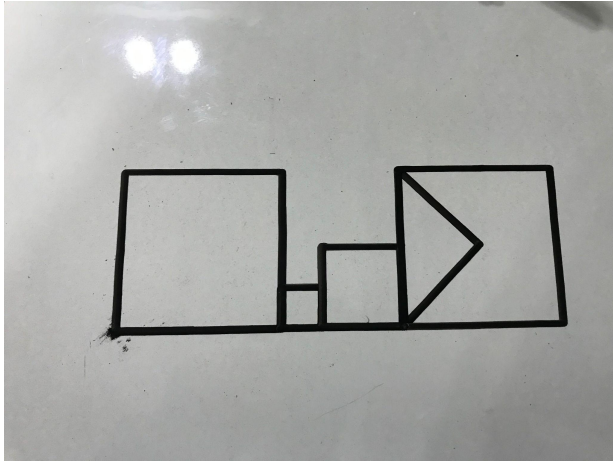
“Grbl is a free, open source, high performance software for controlling the motion of machines that move, that make things, or that make things move...”
-GRBL dev team

Movement

CoreXY Configuration

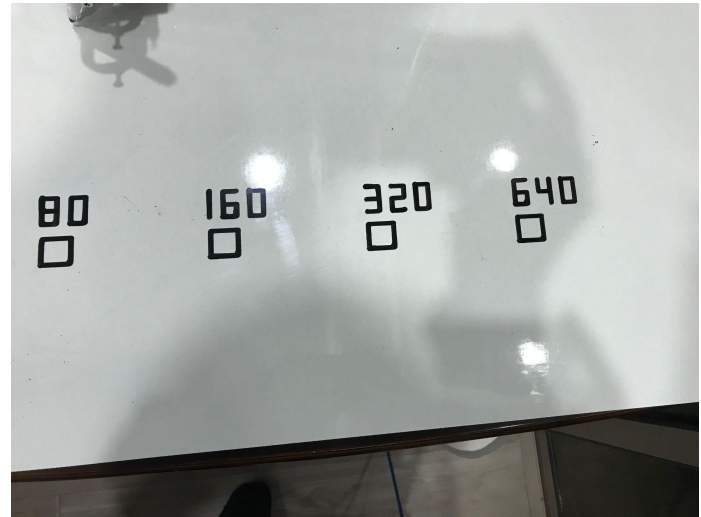


Results And Analysis

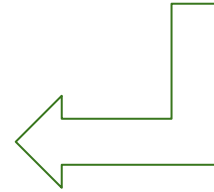
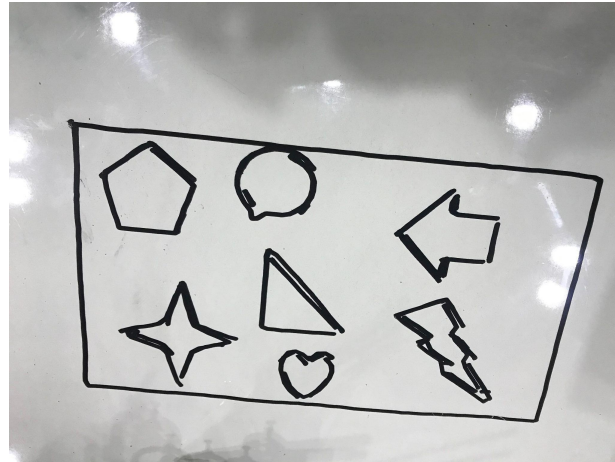
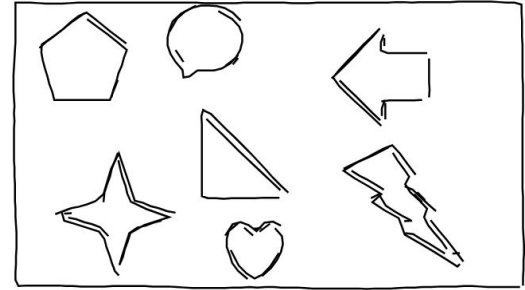
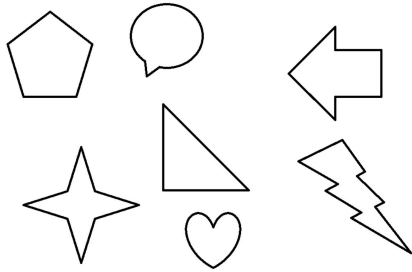


Geometry Tests

Feed-rate Tests



Results And Analysis (cont...)



Future Work

1

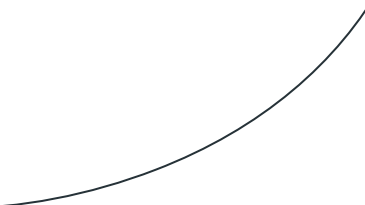
Shape Filling

One of the near-future work will be supporting drawing filled shapes. currently the device supports only line drawing.

2

Processed Image Customizability

In the future the application will provide the user with some image processing parameters that can change the output of the processing pipeline to meet the user's need.



**Thanks For
Listening**