

## My Past Projects

This Folder contains a small selection of material about three past projects of mine.

### **Innovation Project 2017:**

As part of my mechanical engineering studies at ETH Zürich I participated in the innovation project together with a small team of five people. In the innovation project, over 90 teams are challenged to find the best solution for this year's task. Therefore, we had to build a robot which can conduct research through collecting probes on a fictional asteroid. As an additional challenge, no wheeled robots were allowed.

My primary responsibility was the mechatronics section and the writing of the control code in Labview.

### **Arcade Cabinet:**

For my graduation work at the Gymnasium I built an Arcade Cabinet. This involved planning and building the cabinet itself, connecting and reading input devices through an Arduino and programming the software and some videogames in Java.

I wrote a complete documentation of the project, which I included in this folder. I apologize for not having an English version of that document. I also included the code of the main arcade software and of the Arduino input handling.

### **Pixel Art Display:**

This was a private project of mine which I did for fun. I built a 16x16 pixels display to show old school pixel art. An Arduino reads sequences of images on an SD card and then displays them on multiple rows of LED-strips. The case was all built by lasercut MDF pieces and a 3D printed frame to cleanly separate the individual pixels.

I also included the code which runs on the Arduino.