Plan to Finish

Project: Pianodo

Project Planning & Design
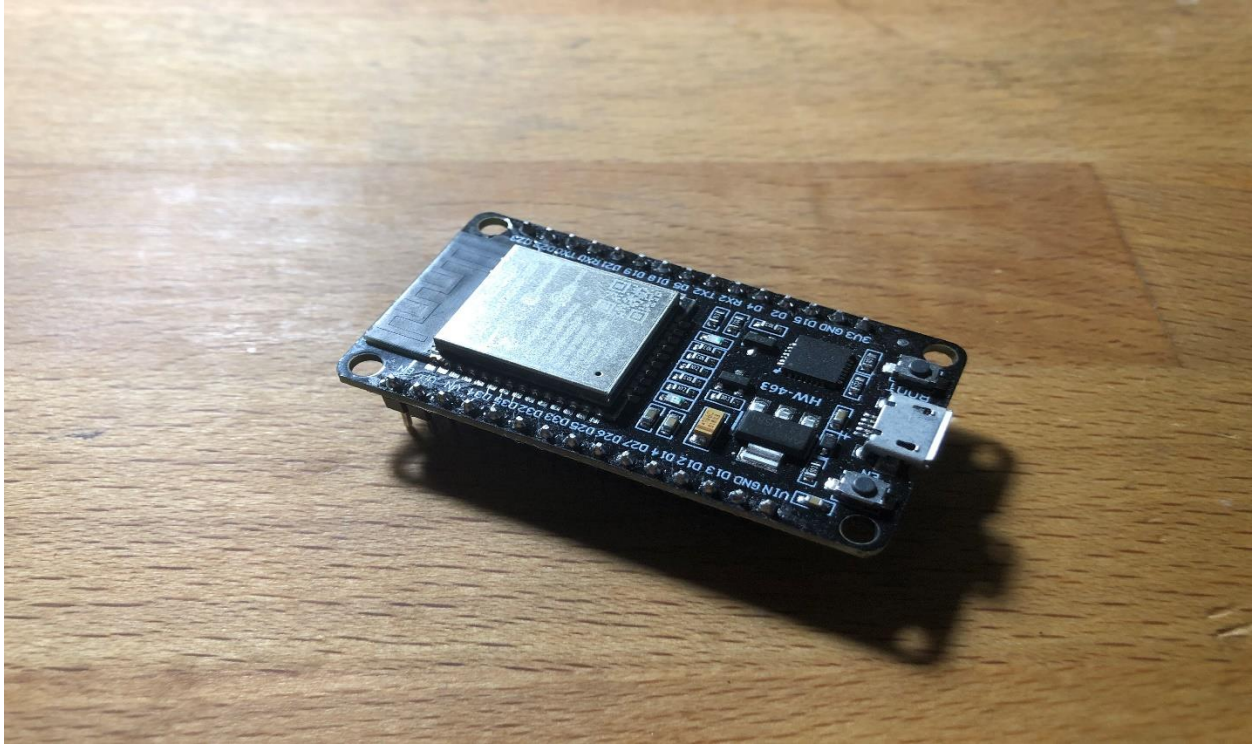
Mohamed Tavakoli

What has been completed so far:

- ➢ Received most parts for project.
- ➢ Was able to fully assemble logic control board.
- ➢ Was able to almost assemble solenoid control boards fully (missing one part).
- ➢ Was able to prototype solenoid operation on Pianodo (on one key).
- ➢ Tested all 24 solenoids for operation.
- ➢ Performed some tests with solenoid control board.
- ➢ Began some small breadboarding (for Arduino Pro Micro, ESP32 and 16x2 LCD).
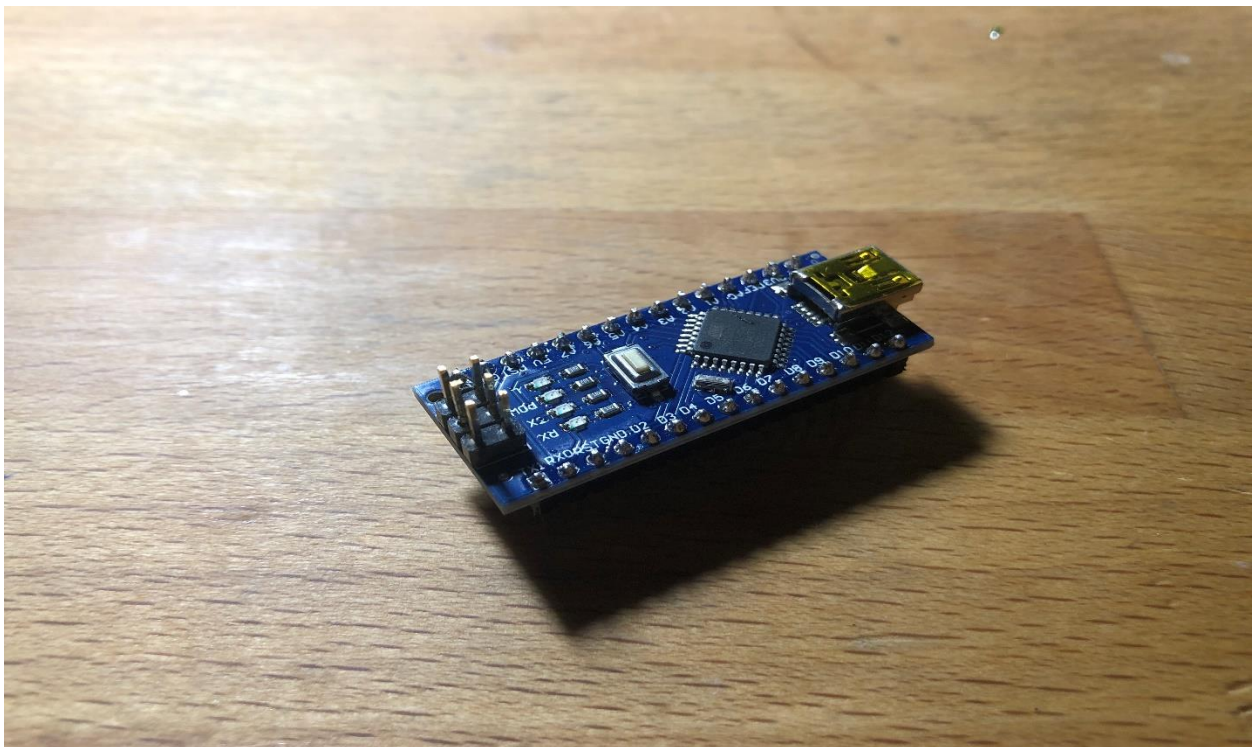- ➢ Began some programming prototyping.

Pictures:

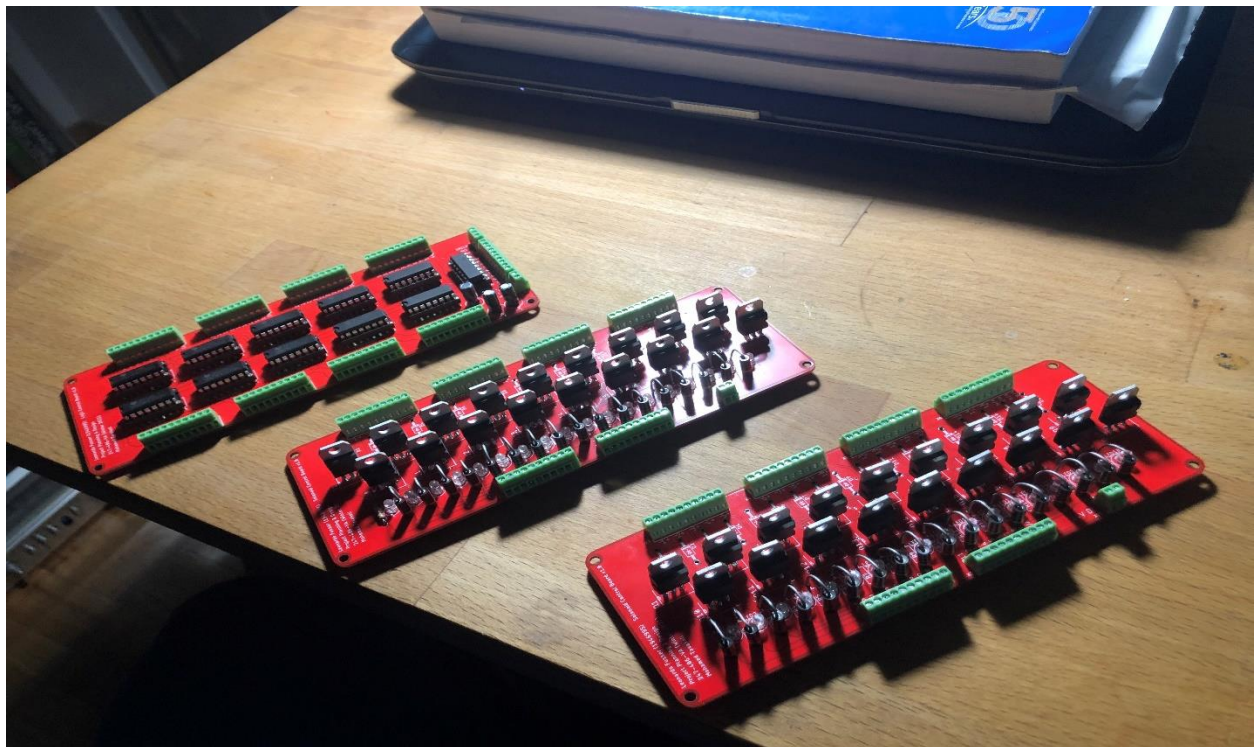

LCD module used for user display.

ESP32 used for wireless connectivity to mobile device to control Pianodo.
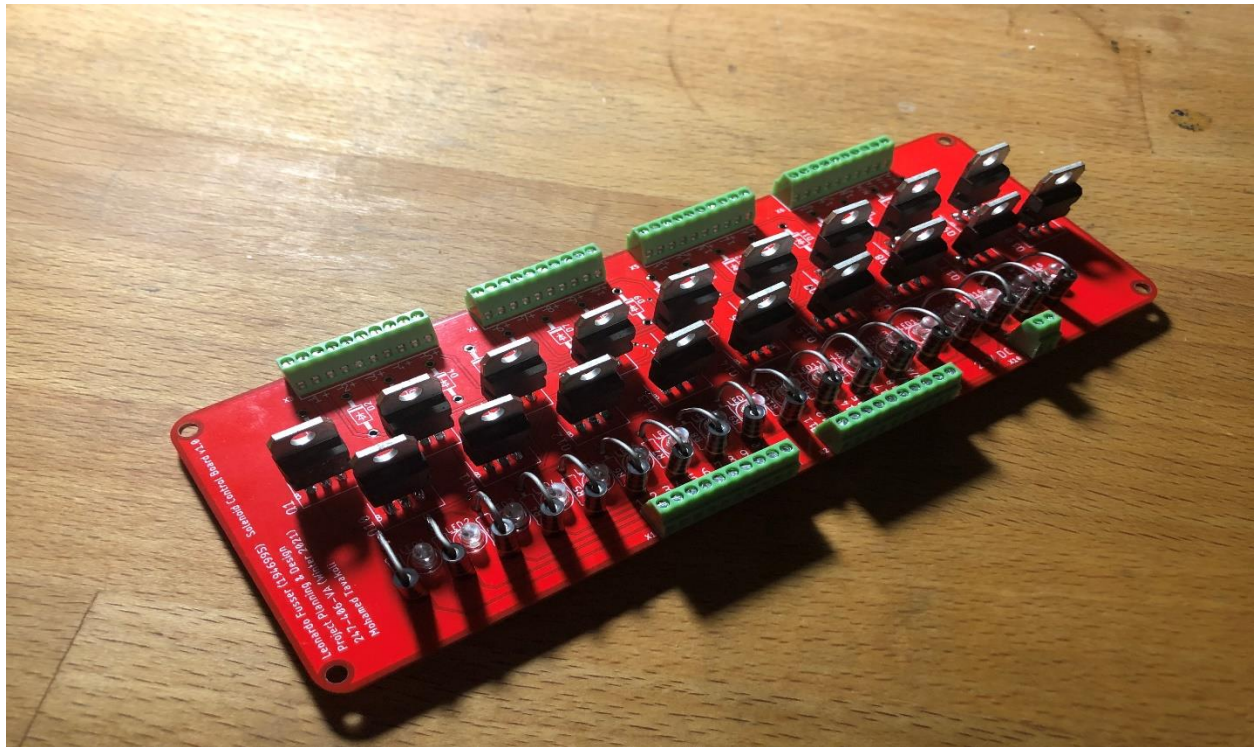

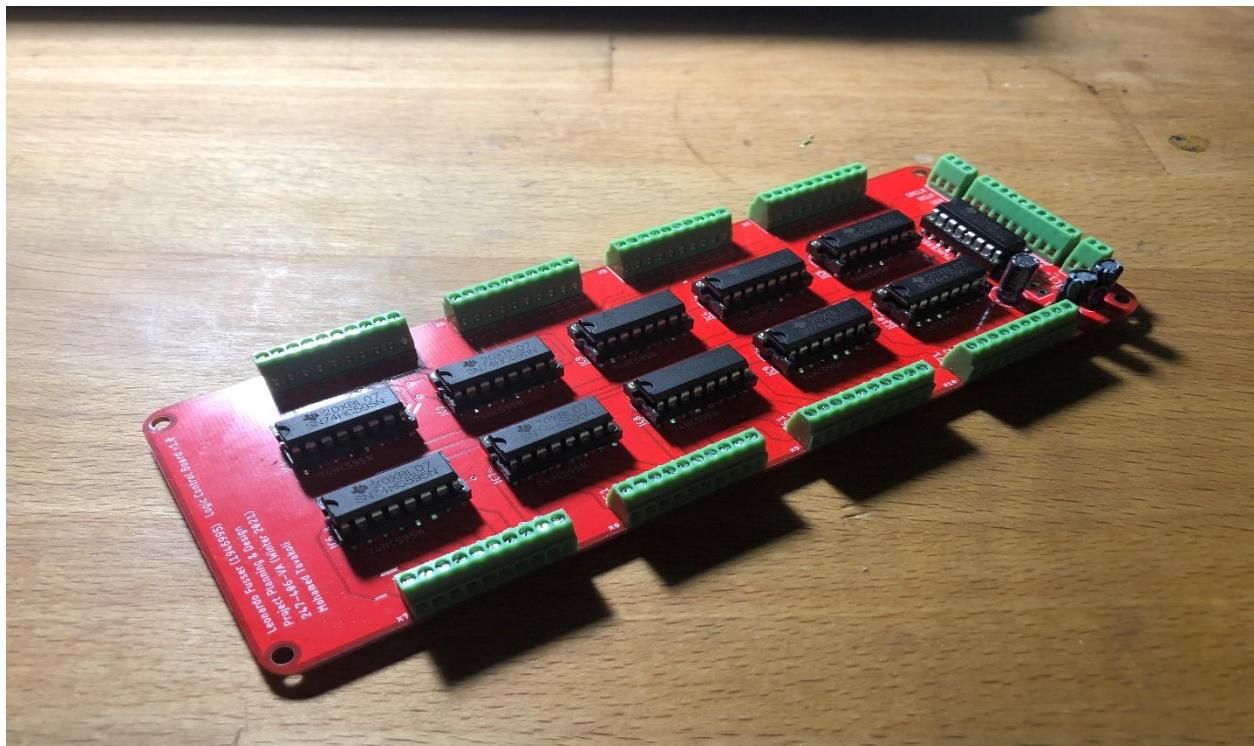*Arduino Pro Micro used as the main control of Pianodo.*

All 24 solenoids for the 24 keys on Pianodo.

All three boards used to control all 24 keys on Pianodo.

Solenoid control board for Pianodo. Two of these boards will control all 24 keys.

Logic control board for Pianodo. This will provide logic control for Pianodo's keys.

Work left to do:

- ➢ Complete solenoid assembly (attach all 24 solenoids to all 24 keys).
- ➢ Complete all electrical wiring (for solenoids, LCD, Arduino and ESP32).
- ➢ Complete programming.
- ➢ Final tests for operation.
- ➢ Finishing touches (aesthetics).

Remaining weekly breakdown:

Week	Task to complete
Week of the 19th of April	*Complete solenoid assembly and electrical wiring.*
Week of the 26th of April	*Complete programming.*
Week of the 3rd of May	*Conduct final tests for functionality.*
Week of the 10th of May	*Conduct finishing touches for looks.*