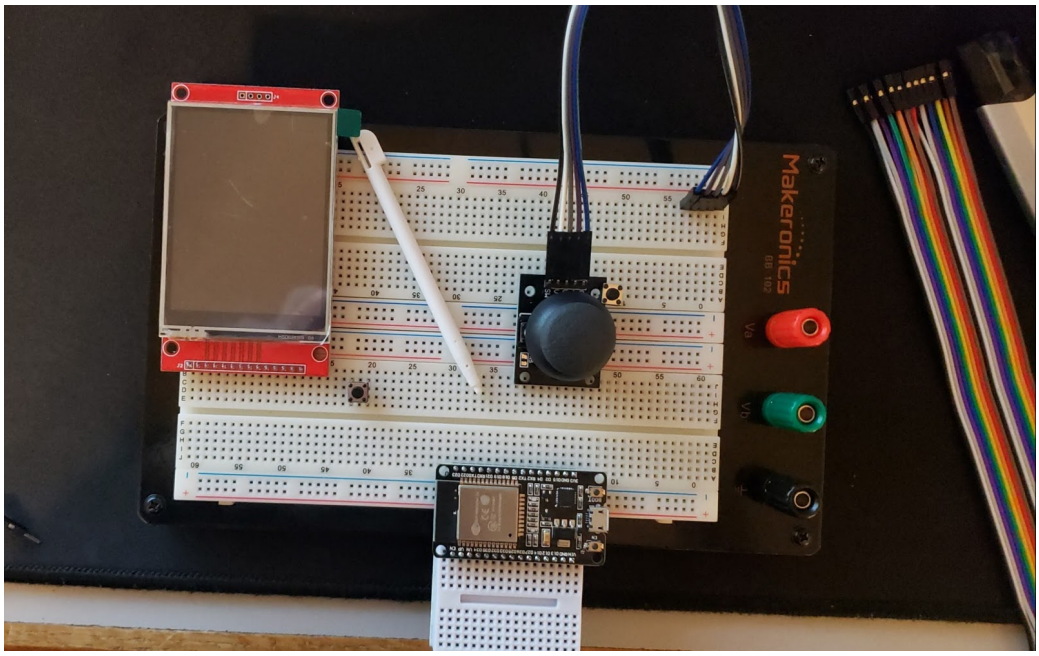
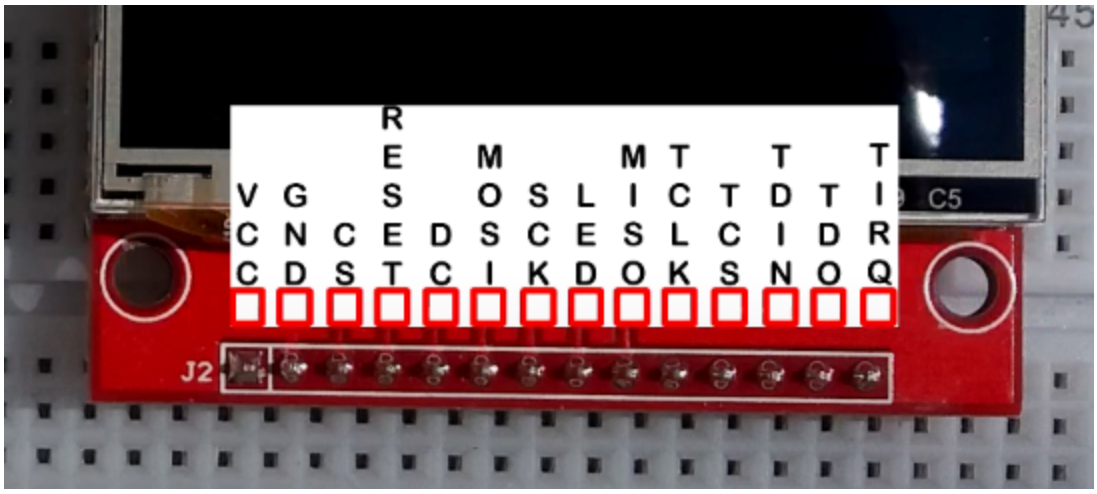
ESP 32 and TFT LCD Build Progress
FALL SEMESTER 2020

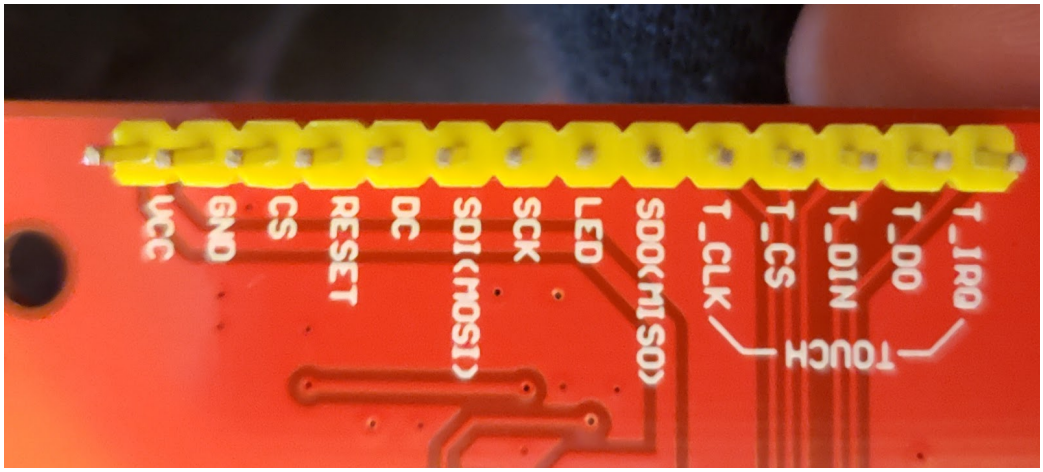
Layout

Looking at our first design photo,





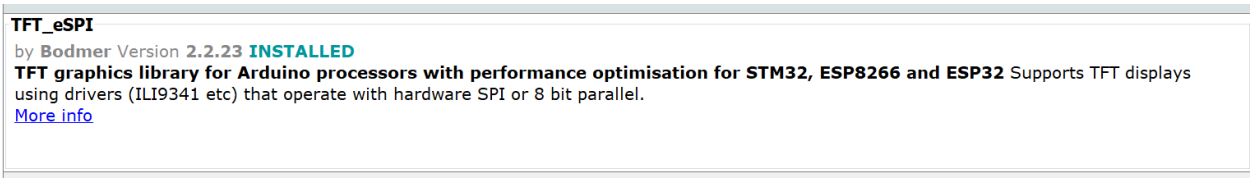
Pin Layout credit to [XTronical]



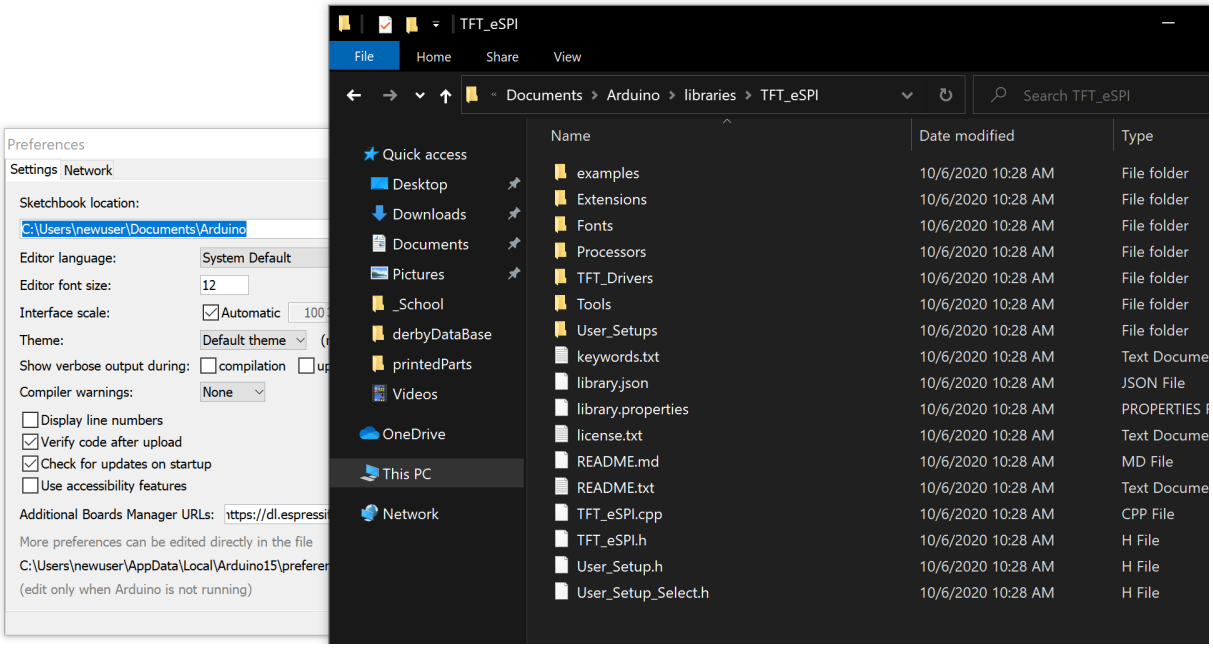
Screen and device working in unison

Pin Layout Credit, My phone camera and the back of the board,

Side note here, Why on earth would you put a pin layout like this, which could fit on the front EASILY. Continuing.



Installing the TFT LCD Library to allow the device to utilize the screen



Since we are developing something different here we have to go to the User_Setup.h and change our preferences to make sure we are utilizing this correctly, Without this, it would NOT work.

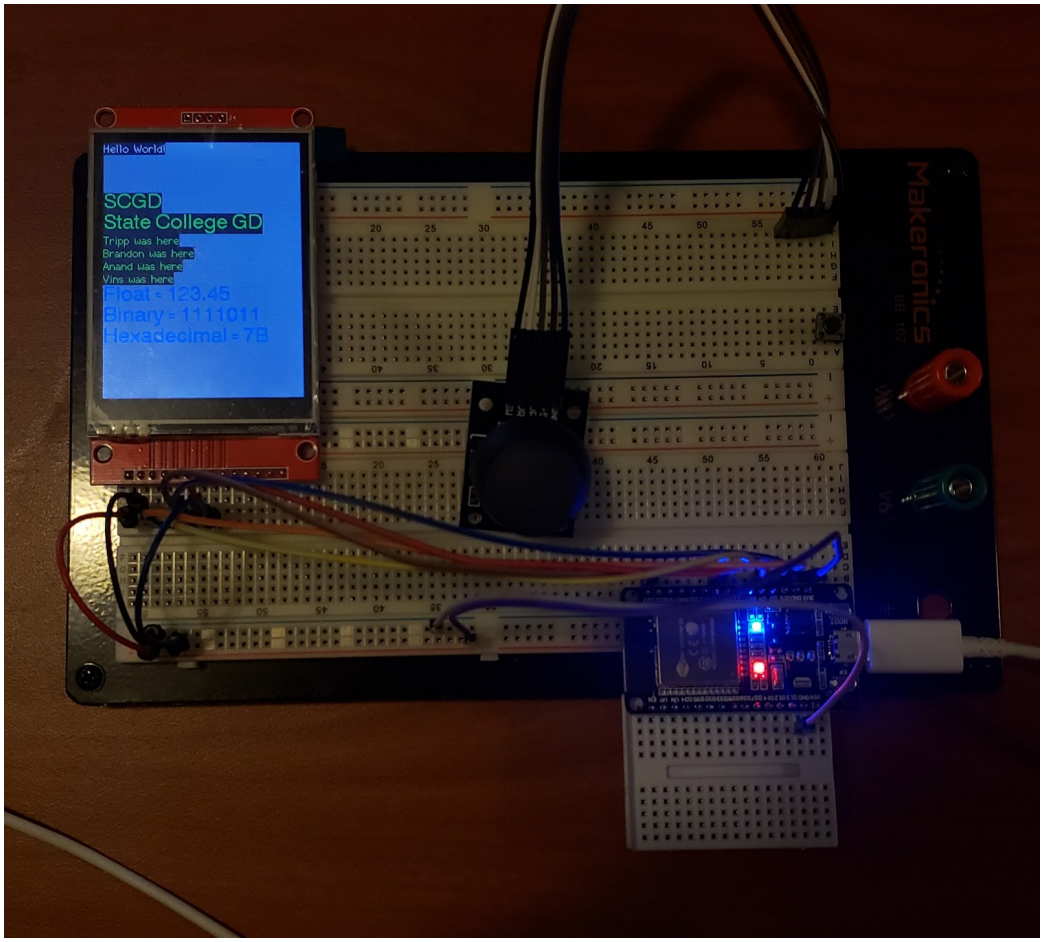
```
185
186 // ###### EDIT THE PIN NUMBERS IN THE LINES FOLLOWING TO SUIT YOUR ESP32 SETUP   ######
187
188 // For ESP32 Dev board (only tested with ILI9341 display)
189 // The hardware SPI can be mapped to any pins
190
191 //#define TFT_MISO 19
192 //#define TFT_MOSI 23
193 //#define TFT_SCLK 18
194 //#define TFT_CS   15  // Chip select control pin
195 //#define TFT_DC    2  // Data Command control pin
196 //#define TFT_RST   4  // Reset pin (could connect to RST pin)
197 //#define TFT_RST  -1  // Set TFT_RST to -1 if display RESET is connected to ESP32 board RST
198
199 //#define TOUCH_CS 21     // Chip select pin (T_CS) of touch screen
200
201 //#define TFT_WR 22    // Write strobe for modified Raspberry Pi TFT only
202
203 // For the M5Stack module use these #define lines
```

Here we define pin headers

Comment out these lines

```
153  // ###### EDIT THE PIN NUMBERS IN THE LINES FOLLOWING TO SUIT YOUR ESP8266 SETUP ######
154
155  // For NodeMCU - use pin numbers in the form PIN_Dx where Dx is the NodeMCU pin designation
156  #define TFT_CS    PIN_D8  // Chip select control pin D8
157  #define TFT_DC    PIN_D3  // Data Command control pin
158  #define TFT_RST   PIN_D4  // Reset pin (could connect to NodeMCU RST, see next line)
159  //#define TFT_RST  -1     // Set TFT_RST to -1 if the display RESET is connected to NodeMCU RST or 3.3V
160
161  //#define TFT_BL_PIN D1  // LED back-light (only for ST7789 with backlight control pin)
```

Since this is a wide use display we have to make adjustments accordingly



And Utilizing some examples and expanding our knowledge we now have figured out the full function of the screen.