Updated Project Proposal.

Relevant Components :
INA219 Current Monitor Voltage Sensor Module I2C 0-26V 3.2A Supply 3-5VDC - Rs.420
https://tronic.lk/product/ina219-current-monitor-voltage-sensor-module-i2c-0-26v-?srsltid=AfmBOoqT
5RyyGSN0GwldsggoVyGrh3pwAIuos4VXKyg-PWDd49UC2ycu
ESP 32 - Rs.1100
1602 16x2 Blue Backlight LCD Display - Rs 320
https://tronic.lk/product/1602-16x2-blue-backlight-lcd-display?srsltid=AfmBOopXBzj6PsD0DqRl6kXT
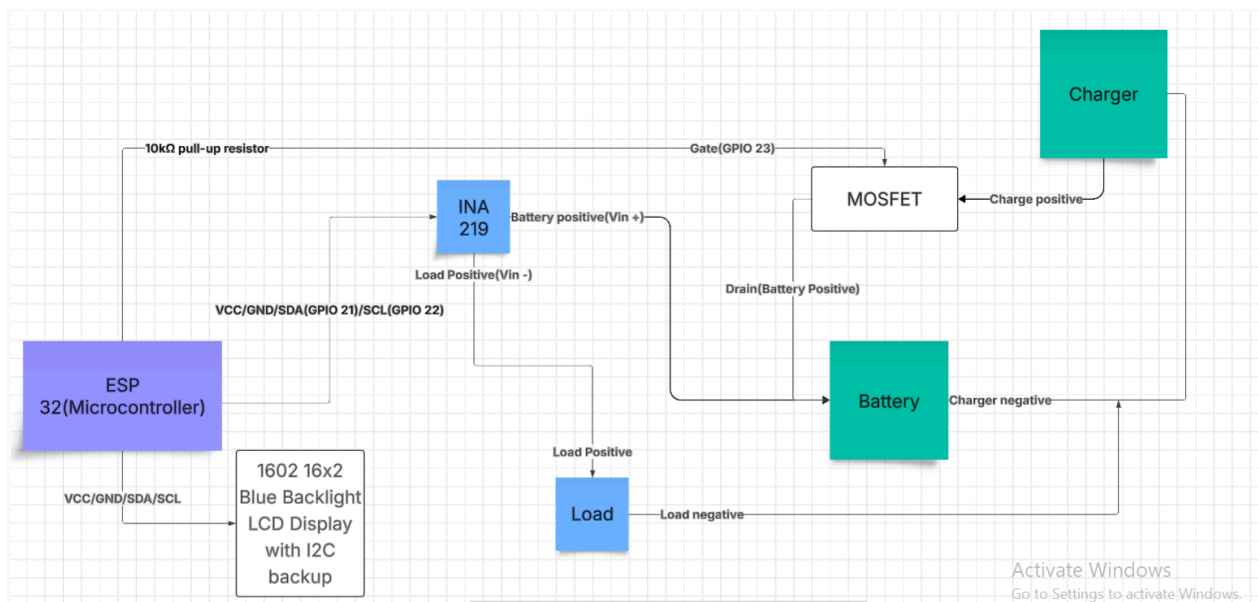6KU2xYW58dcir82kUDWxyHQuzUYldIIb
IRF540N Power MOSFET - Rs.70
https://tronic.lk/product/irf540n-power-mosfet?srsltid=AfmBOoqewqEqIg4nlYBA_cxQlp8QPsZecLCF
keRiac2KBTwUYFUJ3uXc
PCF8574T 8-bit IO Extension - Rs.320
https://tronic.lk/product/pcf8574t-8-bit-io-extension-expander-module-iic-i2c-wit?srsltid=AfmBOor4rr1
82MRGDxAAssaHIL-ugJe205SUk4AENJAtFFHr0F2D5o1f
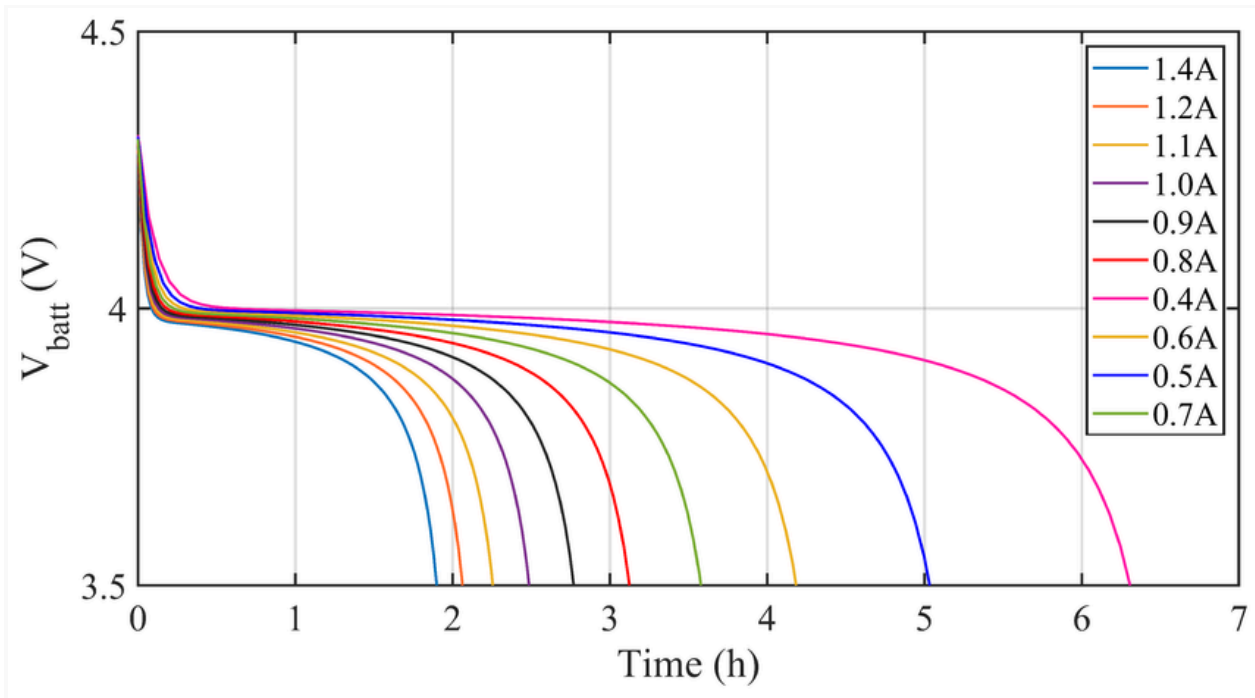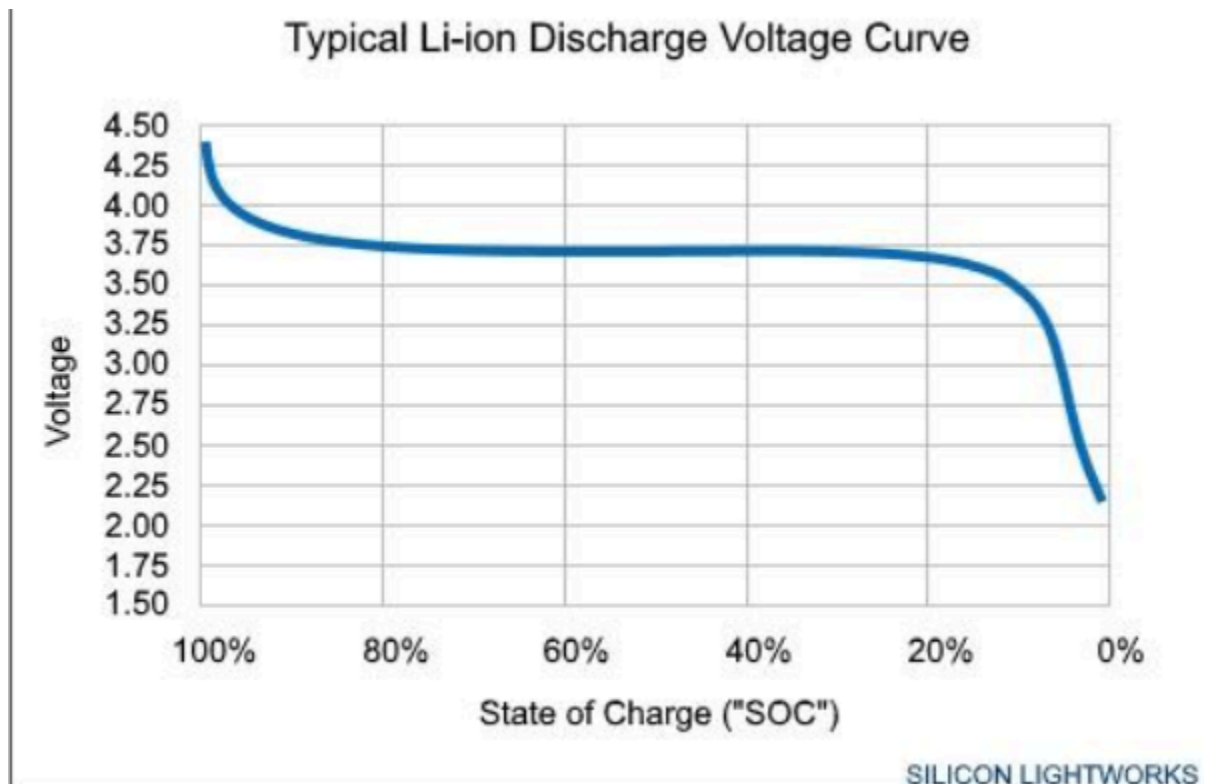Battery Charger

Hardware Structure :

Link :
https://lucid.app/lucidchart/ab63548f-051f-4156-9031-f49bf163c6a3/edit?viewport_loc=-1075%2C-92
8%2C2844%2C1316%2C0_0&invitationId=inv_29a397d6-b607-4a47-abae-1adfe2832558

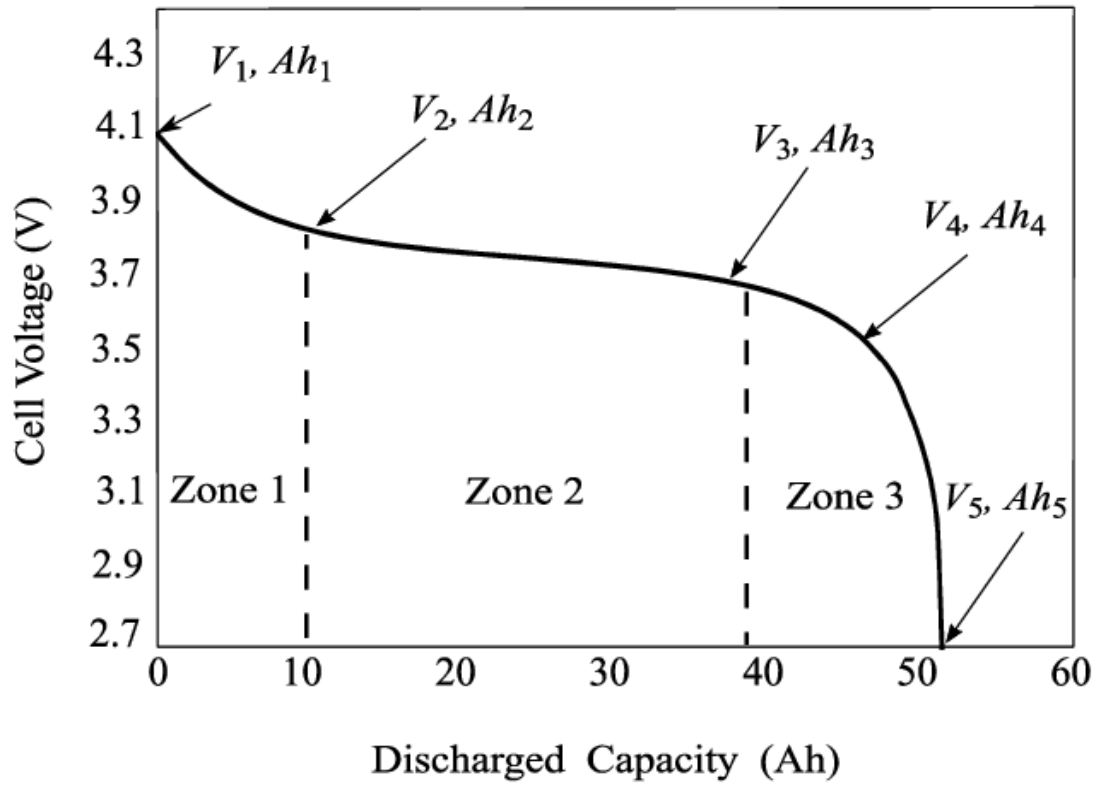Graph analysis and algorithms :

Graph 1

Graph 2

Graph 3

Process :
- Displaying the present voltage,remaining time in the LED display.
- Voltage and current measurement via INA module.
- MOSFET used as a switch

Questions :
- Different capacities
- AL model needed or not?