# AMIT GRADUATION PROJECT

PWM Drawer

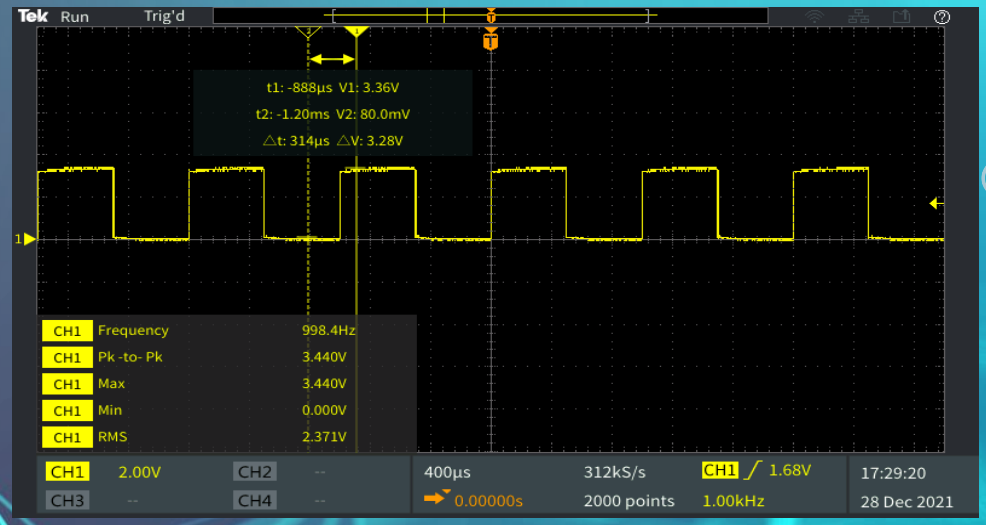

PRESENTED BY:

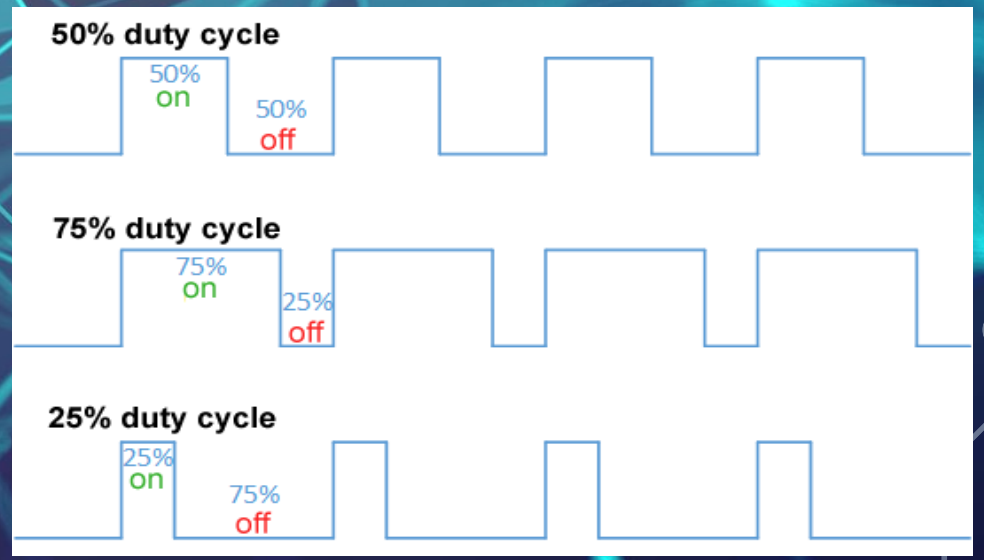
MOHAMED HASSAN ALI

# TABLE OF CONTENTS:

# 1. Introduction

- Pulse Width Modulation is a technique used to control analog devices, using a digital signal. This technique can be used to output an analog-like signal from a digital device, like a microcontroller. We can control motors, lights, actuators, and more using the generated PWM signal. An important thing to note here is that PWM is not a true analog signal. The digital signal is modified in a way to fake an analog signal.



# *Aim of The Project*

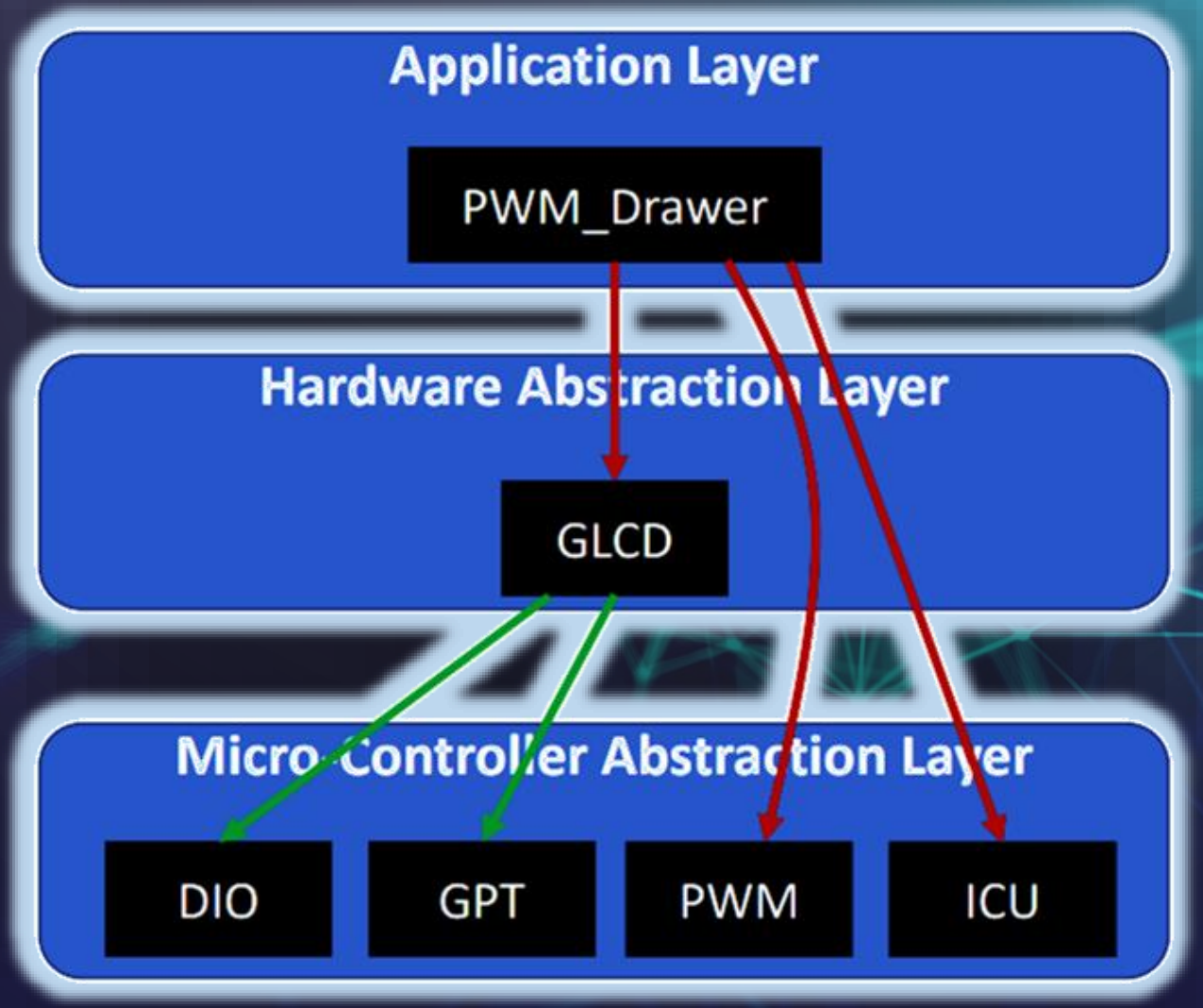
- This Project Aims to Use ATmega32 Microcontroller’s Input Capture Unit to Measure PWM Signal That Comes form other sources or the Microcontroller itself.

# 2. Components

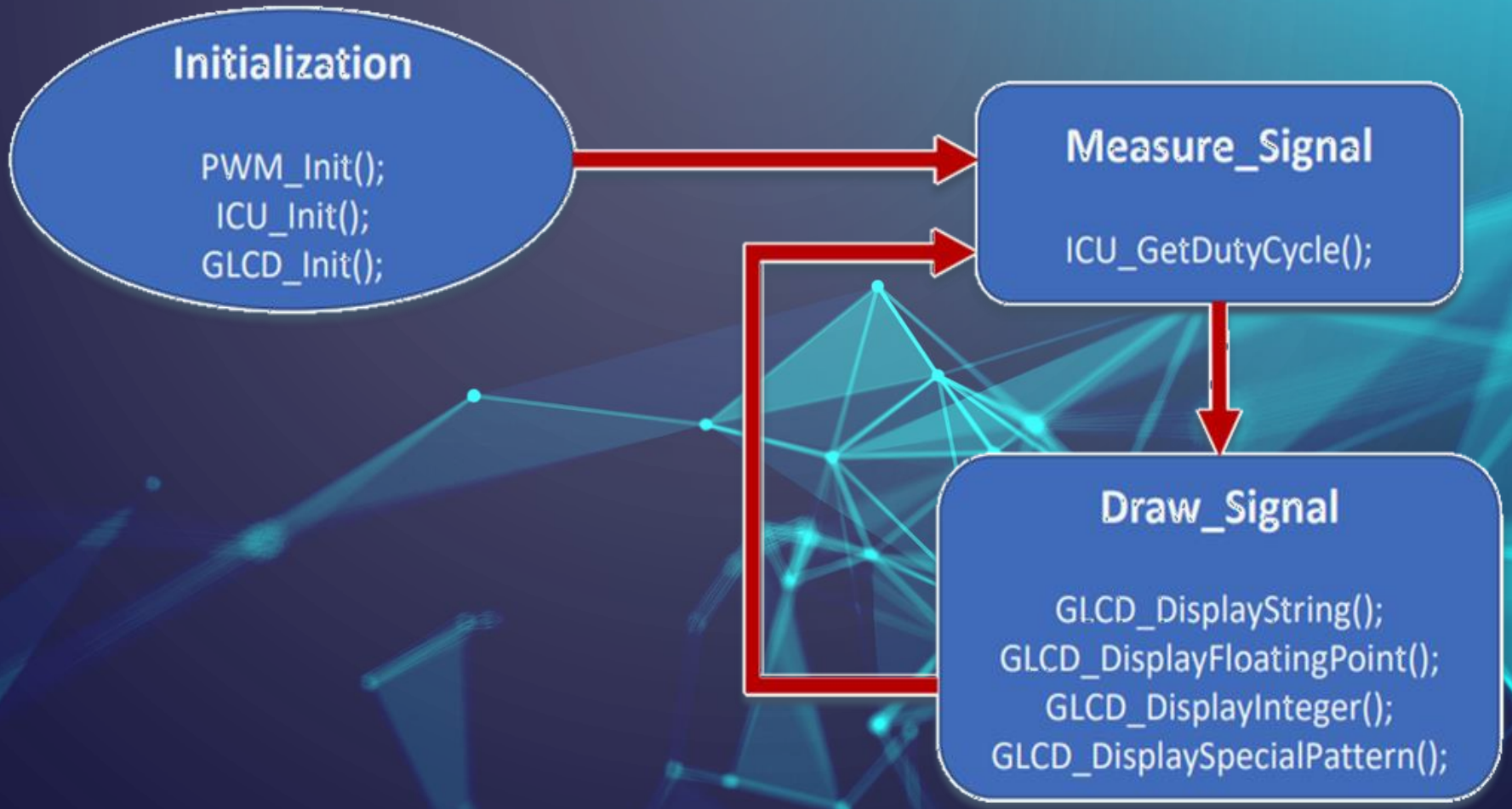
128 X 64 Graphical LCD


ATMega32

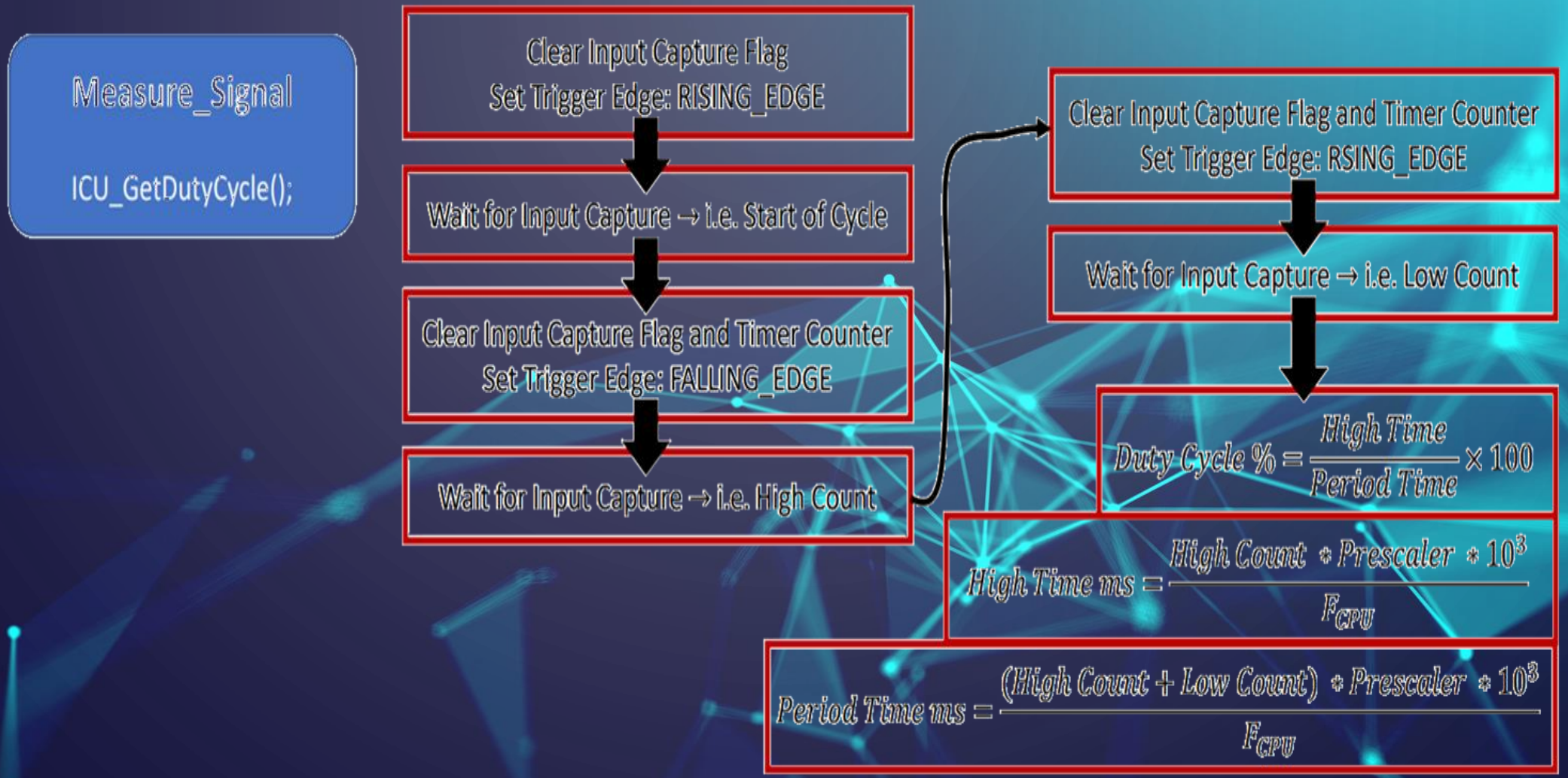
# 3. Layered Architecture



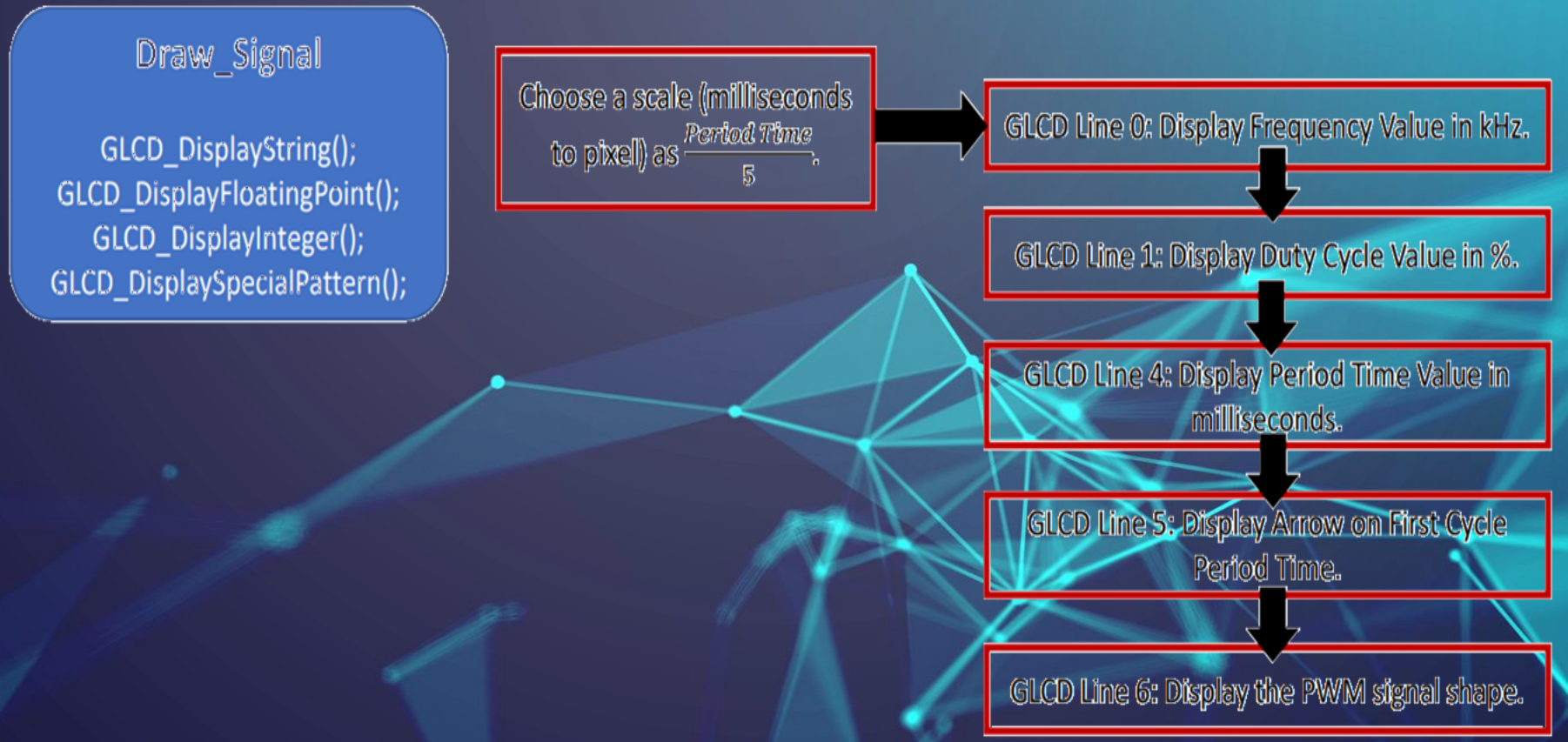
# 4. Flow Chart (A)



# 4. Flow Chart (B)



# 4. Flow Chart (C)

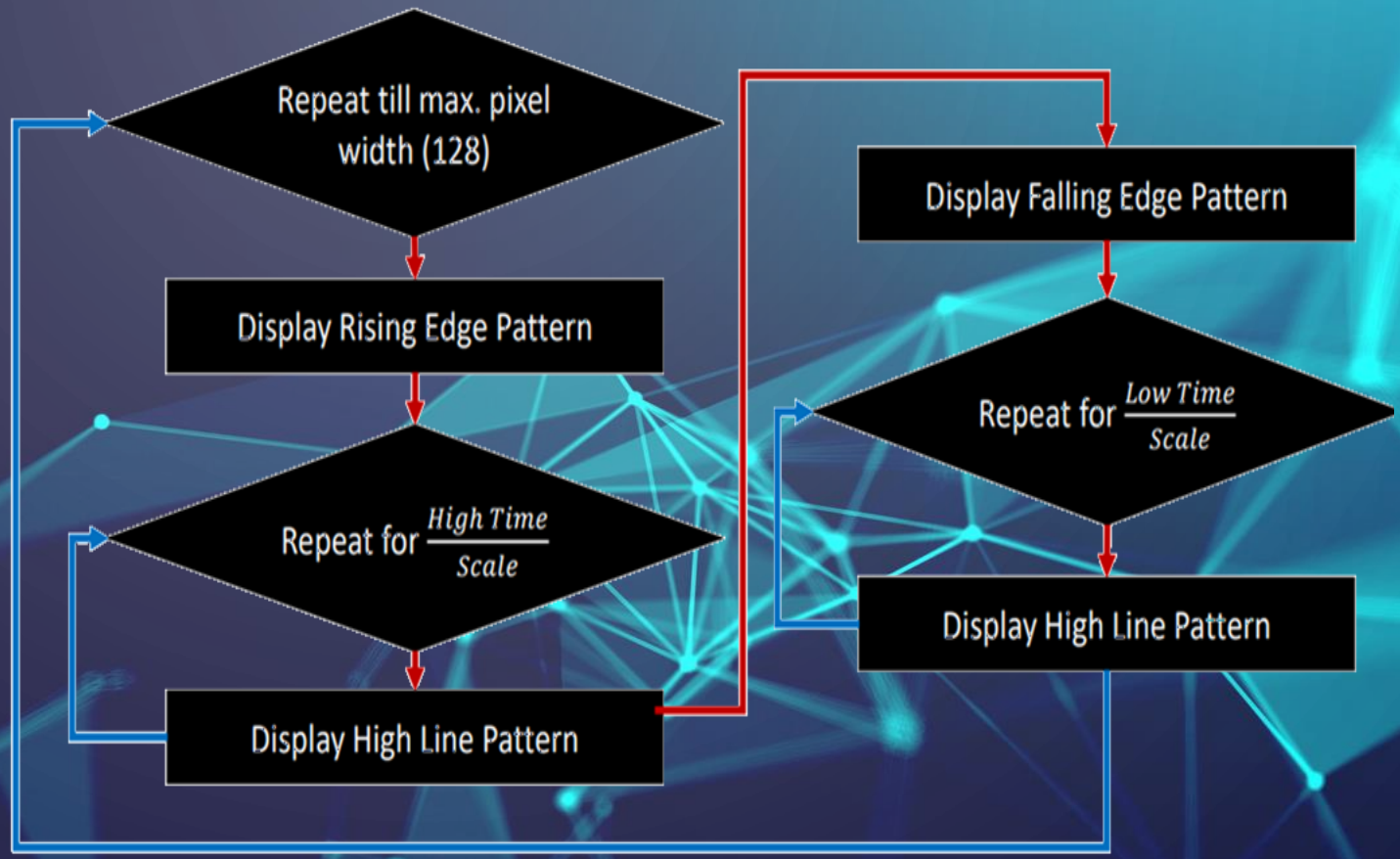


# 4. Flow Chart (D)

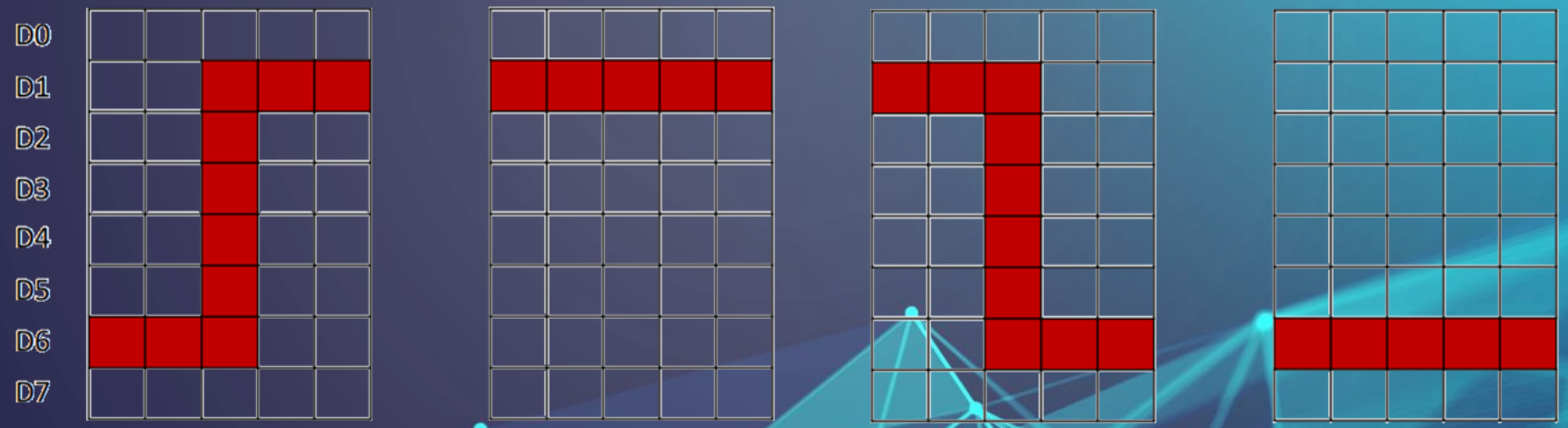
Draw_Signal

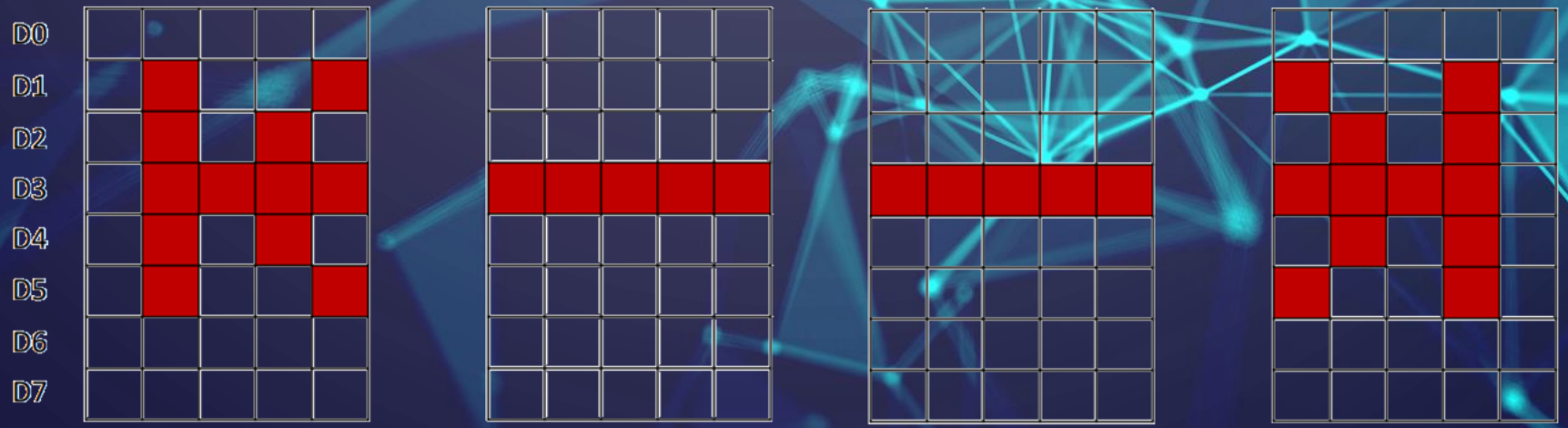
GLCD_DisplayString();
GLCD_DisplayFloatingPoint();
GLCD_DisplayInteger();
GLCD_DisplaySpecialPattern();

GLCD Line 6: Display the PWM signal shape.

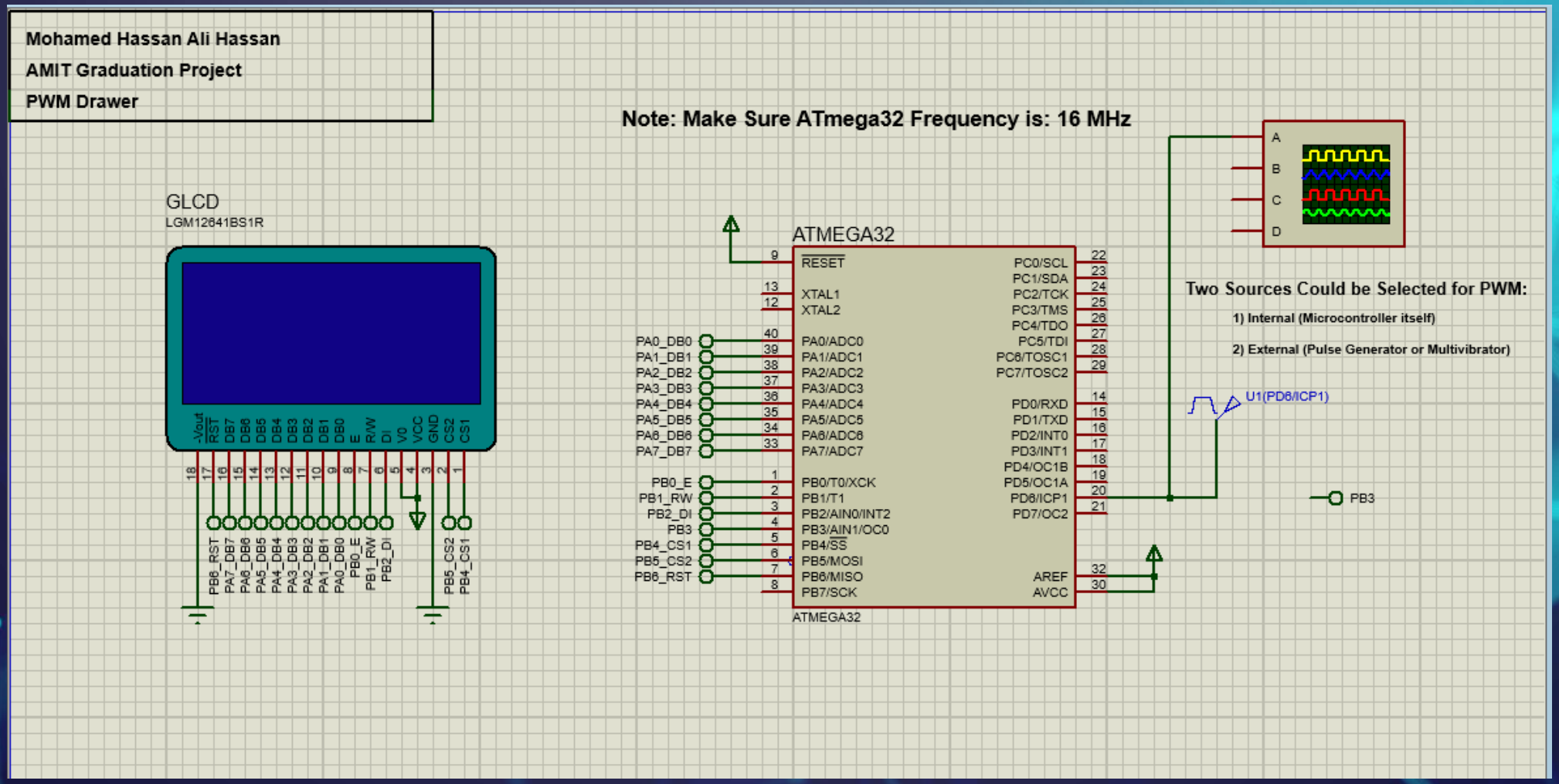


# 5. Special Pattern



# 6. Final Project



# *Thank You*

# *Any Questions?*