



PROGRAMMING AND DESIGN WORKSHOP

IEEE CITY ROBOTICS SOCIETY



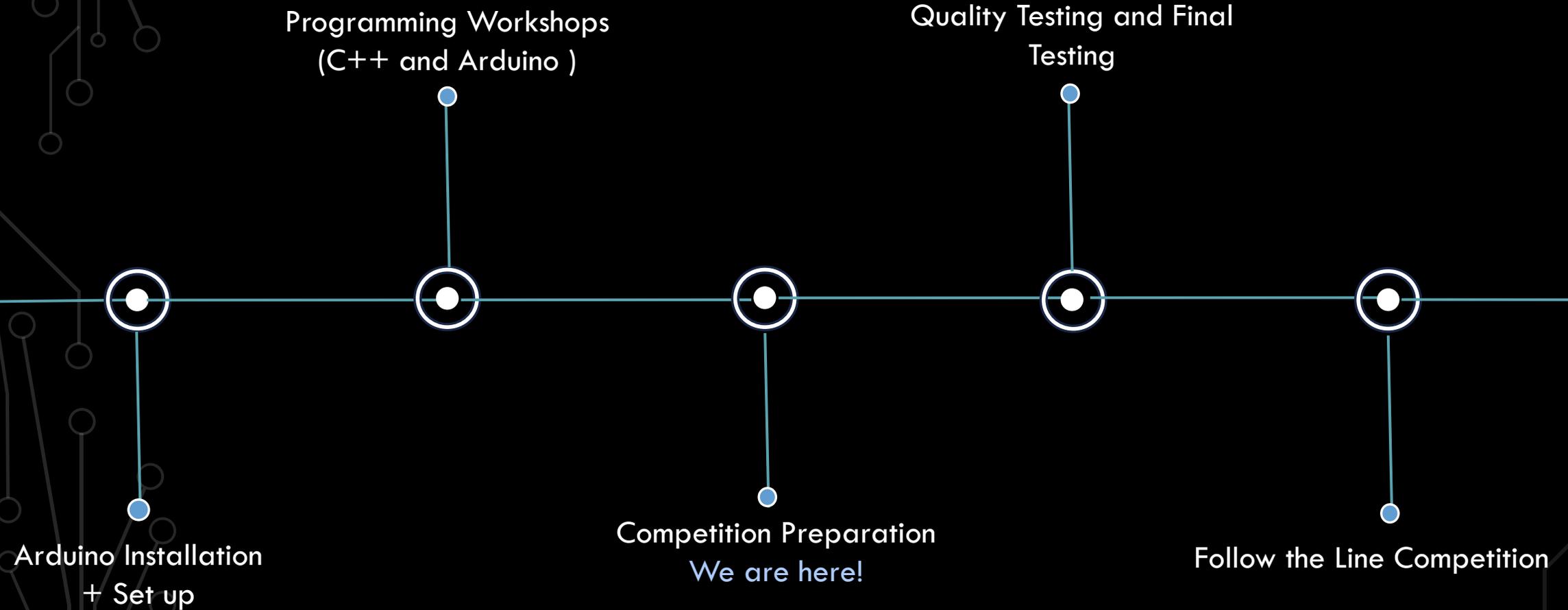
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Today's Agenda

- Timeline
- Further Information
- Data Readings
- Data Reading Code
- General Advice



Timeline for our upcoming events



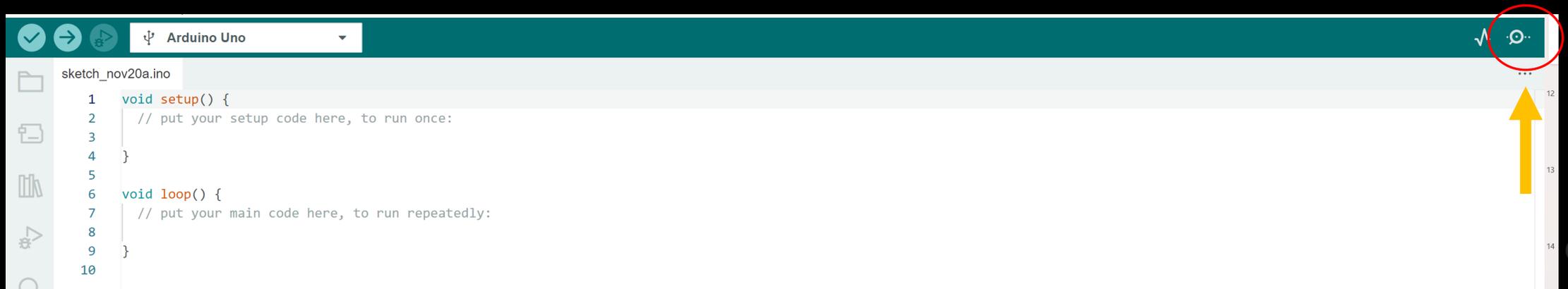
MORE INFORMATION ABOUT THE COMPETITION

- 16 teams will be participating in this event.
- We are going to be using a bracket system to determine the winner.
- There will initial rounds, semi-finals and then finals.
- 2 seen tracks and one unseen track.
- Top 3 will receive a trophy for their team and some other prizes.
- All participants will receive a certificate of participation though.
- Biggest Robotic Showdown of the Year!

HOW TO GET DATA READINGS FROM THE SENSORS?

To do this, we can call the function `Serial.Print()` - Used to print to the console terminal.

- Also, can be used for debugging purposes.
- For this, you need to call this function in the main loop. (Live demonstration).
- Then locate:



```
sketch_nov20a.ino
1 void setup() {
2   // put your setup code here, to run once:
3
4 }
5
6 void loop() {
7   // put your main code here, to run repeatedly:
8
9 }
10
```

HOW TO GET DATA READINGS FROM THE SENSORS?

```
void loop() {  
  R = digitalRead(SR);  
  M = digitalRead(SM);  
  L = digitalRead(SL);  
  
  R = analogRead(SR);  
  M = analogRead(SM);  
  L = analogRead(SL);  
  
  Serial.print(R);  
  Serial.print("\t");  
  Serial.print(M);  
  Serial.print("\t");  
  Serial.println(L);  
}
```

FINAL GENERAL ADVICE FROM ME:

- Make sure you understand how the robot moves. If any doubt, please raise your hand during the session.
- We recommend taking data readings for each of the scenarios. (E.g. dashed lines, straight lines, turning left etc.)
- Plan your strategy!
- You can use if statements to achieve this.
- Remember there will be awards for best code, best lap time, best design and best leader.
- But most of all, remember to have fun!