Motor Connections (via L293D Motor Driver)

- **Motor A (Left Motor)**
  - **IN1** → Arduino **Digital Pin 6**
  - **IN2** → Arduino **Digital Pin 7**
  - **OUT1** → **N20 Motor A +**
  - **OUT2** → **N20 Motor A -**
- **Motor B (Right Motor)**
  - **IN3** → Arduino **Digital Pin 8**
  - **IN4** → Arduino **Digital Pin 9**
  - **OUT3** → **N20 Motor B +**
  - **OUT4** → **N20 Motor B -**

Power Connections

- **VCC (L293D)** → **5V** on Arduino
- **GND (L293D)** → **GND** on Arduino and the battery
- **Motor Power (L293D)** → **External Battery (7.4V – 12V)**

Sensor Connections (8 Line Sensor Array)

- **SENSOR1** → **A0** (Arduino Analog Pin)
- **SENSOR2** → **A1** (Arduino Analog Pin)
- **SENSOR3** → **A2** (Arduino Analog Pin)
- **SENSOR4** → **A3** (Arduino Analog Pin)
- **SENSOR5** → **A4** (Arduino Analog Pin)
- **SENSOR6** → **A5** (Arduino Analog Pin)
- **SENSOR7** → **Digital Pin 10** (Arduino)
- **SENSOR8** → **Digital Pin 11** (Arduino)

Connections Overview:

1. **Motor A (Left Motor)**:
   - IN1 → Digital Pin 6
   - IN2 → Digital Pin 7
   - OUT1 → Left Motor + (N20 Motor A +)
   - OUT2 → Left Motor - (N20 Motor A -)
2. **Motor B (Right Motor)**:
   - IN3 → Digital Pin 8
   - IN4 → Digital Pin 9
   - OUT3 → Right Motor + (N20 Motor B +)
   - OUT4 → Right Motor - (N20 Motor B -)
3. **Line Sensors**:
   - SENSOR1 → A0
   - SENSOR2 → A1
   - SENSOR3 → A2

- SENSOR4 → A3
- SENSOR5 → A4
- SENSOR6 → A5
- SENSOR7 → Digital Pin 10
- SENSOR8 → Digital Pin 11

4. **Power**:
   - VCC (L293D) → 5V on Arduino
   - GND (L293D) → GND on Arduino and Battery
   - Motor Power (L293D) → External Battery (7.4V–12V)