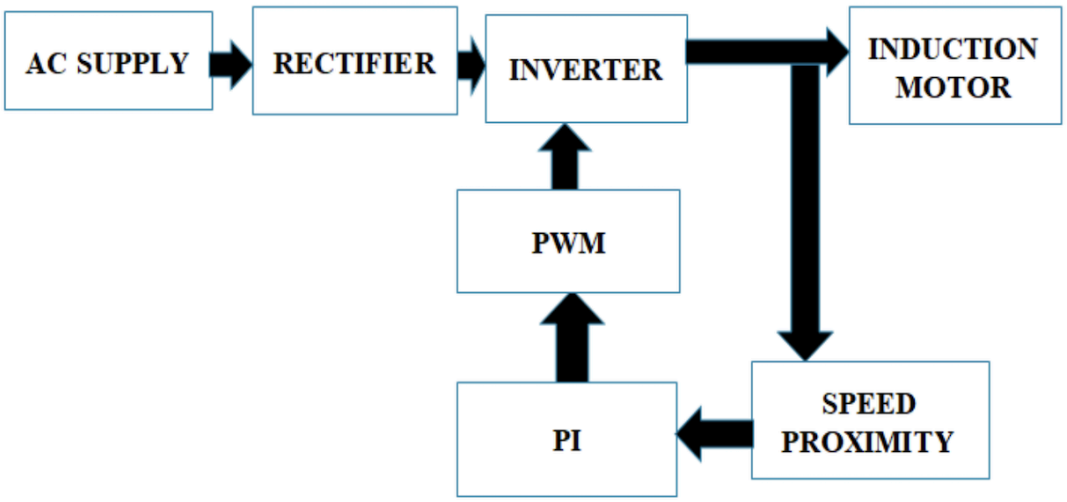
SPEED CONTROL OF INDUCTION MOTOR USING RENEWABLE ENERGY IN IOT

- The main aim is to diagnose the common electrical and mechanical faults experimentally with suitable signal processing techniques.
- To protect the motor against a few faults, for example, over current, higher/lower down voltage, over temperature in windings, overloading of the motor.
- To improve the disturbance rejection property of permanent magnet synchronous motor (Induction motor) speed control system.
- To increase the productivity of an IM and to reduce maintenance costs of these systems, reliable condition monitoring and diagnosis is often desired.
- In the speed controller circuit the BT136 circuit is introduced to control the speed of the motor. Node MCU will receive the feedback from both user and induction motor.
- Node MCU is used to increase and decrease the speed of the induction motor.



- These improved methods give the advantage of controlling the speed of the induction motor from distance.
- Instead of changing velocity or current to adjust the speed of the motor. We are changing the waveform of velocity to adjust the speed of the motor.
- The feedback of the speed connection is established to the Node MCU controller and thus, the Node MCU transfers the speed signal through WIFI.
- With the help of an IP address and logging into it , we can control the speed within the permissible bandwidth of WIFI.

- The parameters such as voltage , current, speed and torque of the induction motor were monitored. So, input values or parameters are maintained in limits and the speed of the induction motor is controlled in a manner using IOT.
- IOT achieves industrial automation through remote access and also increases the optional efficiency , lower cost , and improves productivity in automation.
- The benefits of adapting IOT are highly automated , improves efficiency, reduces the manual work and can be operated from various places and is easy to access.