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Professor Giles

EC 450 Microcontrollers (Microprocessors)

Project Title: Line Following Robot

We have created a robot that follows a marked path using optical sensing and proportion control. The sensor is made up of photo resistors and LEDs. The sensor readings are processed by the ADC and pulse with modulation is used to power the motors. For our demonstration we have prepared a path consisting of a black line on white paper. Our robot will follow this path. The initial step the robot takes is calibration. During this stage the user must first place the robot on a completely black surface until the LEDs begin to blink. Then the user must place the robot on a white surface until the LEDs blink again, which indicates that calibration is complete. Now the user may place the robot on the designed path. Then the robot will commence to traverse on the path.