RESUME

Harnoor Singh

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E-Portfolio

Objective

Building new electronic projects to ease everyday life.

Education

Bachelor of Technology – [Computer Science & Engineering]
Maharaja Ranjit Singh Punjab Technical University, Bathinda
July 2019 – July 2023

Work Experience

Self Employed at

Noor Automation Solutions, Malout, Punjab. 03NLHPS2647E1ZV
(Repaired CNC Machines in Industries located in Malout area
 i.e Gill Agro Ind, Deluxe Agro Ind, Madan Industries)
May 2020 – July 2021 (During Lockdown Period) (1Yr)
July 2023 – Current (After Completion of Degree) (2Yr)

Skills

- ❖ Technical Skills:
  - ➢ CNC(All Types) Operating, Programming, Repairing.
  - ➢ Microcontroller Programming & Testing.
  - ➢ Automating Projects using SCADA/HMI/PLC/Embedded Systems.
  - ➢ Great understanding of Electronics & Electrical Equipments (Relays, Contactors, Transformers, AC Servo Drives, DC PWM Drivers, AC VFDs, Steppers, Circuit Boards)
  - ➢ Good understanding about anlog electrical logic control systems.
    (Built Automatic hydraulic press control modules using relay logics)

- ❖ Soft Skills:
  - ➢ 1. Basic Web Development. (PHP, HTML, CSS, JS, Python)
  - ➢ 2. Basic Android App Development (Java & Android Studio)
  - ➢ 3. Sys-Admin. (Linux, Windows) (Docker, HestiaCP, Pterodactyl, Webmin)
  - ➢ 4. PCB Design (Autodesk Eagle, Proteus, KiCad), Printing.

- ❖ Programming Languages:
  - ➢ C/C++ (Non-GUI, Microcontrollers, Embedded Systems)
  - ➢ Java (Backend) (Frontend in android app Development)
  - ➢ PHP (Backend Api Endpoint Building for IoT Purposes)

- ❖ Database Management:

  - ➢ MySQL (MariaDB, Mysql) (Linux & Windows)

Projects

RPM Counter

An ATMega32A Chip based RPM Reader which can read up to 2 Inputs and display RPM over 7-Segment Display.

IoT-Motor Starter

An IoT Board Designed with multiple chips to allow users to control a Motor or any other Electrical Equipment by using Internet and GSM services instead of WIFI Cover wide Area and allow Remote Access from anywhere in the world.

Three-Phase & Single Phase Servo Controlled Voltage Stabilizer Control Board.

An ATMega128A Chip based PCB Control Board to control Synchronous motor of AutoTransformer on Servo Stabilizer. Project is **Open Source** at Github.com/saini999/004-3PHSERVO-ATMega1284P

PWM Based DC Motor Speed Controller

An Electronic Circuit to Control the Speed of a DC Motor from either a Digital Input (ie an Microcontroller) or an Analog input (ie an 555 Based Timer or a Transistor based Switch)

Three-Phase AC Motor Starter with Star-Delta Startup along with Phase Angle Detection. (Two Projects: 1. With Microcontroller, 2. Using Relay Logic and Timers)
   1. Uses an PIC16(L)F676 Microcontroller for checking the input phase angle along with running Star-Delta Starting Timers with configurable timings using Pots.
   2. Uses an Delay Timer connected to Contactors which control the Star-Delta Startup.

Laser Leveler (Work in progress)

A Dual microcontroller based Leser Leveling module designed to help with Modern farming equipment. Uses Modbus protocol for communication between the two chips. Uses Arrays of LDRs to detect the level of laser and move the bucket to the set level.

Spot Welding Cutoff Controller

An AVR Microchip based Variable Timer for cutting off Spot Welding power as soon as the arc is sensed. Uses an Rotary Encoder and 16x2 LCD Display for UI. Timer Variability from 1ms to 10s.