Ravi .M.K

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Academic Qualification:

PhD(pursuing) in Electronics and Communication –Himalayan University Itanagar Aurunachal Pradesh
M Tech in Industrial Electronics –SJCE Mysore
BE in Electronics and Communication –Malnad College of Engineering,Hassan.

Experience:

- Possess 15 years of experience in Teaching (Electronics & communication)
- Possess strong problem solving capabilities, excellent communication and management skills in a highly professional environment, with a proven commitment to meet deadlines.
- cent percent result for two consecutive years
- worked as Technical support engineer at seagull Technologies,Bangalore.

Academic:

- **RR Institute of Technology – Bangalore** **Aug 2010 to till Dated**
  Assistant professor in the Dept of Electronics & communication

- **DON BOSCO Institute of technology – Bangalore** **Aug 2007 to 2010**
  Senior Lecturer in the Dept of Electrical &Electronics

- **Kalpataru Institute of Technology –Tiptur** **Sep 2004 to 2007**
  Lecturer in the Dept of Electronics & communication

- **Cauvery Polytechnic - Coorg Dist** **Sep 2001 -2003**
  Lecturer in the Dept of Electronics & communication

- **Cauvery Polytechnic - Coorg Dist**
  Lecturer in the Dept of Electronics & communication **Sep1998-1999**

Membership of Professional bodies:

- **Indian society of Technical Education**
- **Indian Association of Engineers**

Research & Development

1. COMMISSIONING OF MULTIZONE DIGITAL TEMPERATURE CONTROLLER

Organization **: Seagull Technologies Pvt Ltd [Bangalore**
Client **:** M/S Guardian Plasticote Ltd [Gujarat]
Duration **: 5** months
Team members **:** Four

Role **:** * Testing and troubleshooting the PCBs.
* Designing the electrical control circuits.
* Assisting the technicians in the panel wiring.
* Programming the **PID** controller.
* Documenting the reports.
* Calibrating the measuring instruments.
* Final commissioning of the panel at site.

Description **:** This is a feedback control system in which the temperature of different zones is sensed by the **thermocouples** and fed to the **PID** controller, which is programmed to get the optimum output. This output, which will be varying proportional to the temperature, act as a gating signal to the SCR power module which gives the controlled output to the heater.

2. COMMISSIONING OF 140KW DC DRIVE

Organization **: Seagull Technologies Pvt Ltd**
Client **:** M/S Diamond Cements (M.P)
Duration **: 3** month
Team members **:** Two
Role **:** * Testing and Troubleshooting
* Final Commissioning

Description **:** This is also a feedback control system in which the speed of the motor is controlled, here the feed back unit is the **taco generator.** The taco generator generates an output which is proportional to the speed of the motor. This signal is fed to the electronic card where it is processed and fed as a gate signal to fully controlled SCR bridge network. Thus providing a controlled dc, which is fed to the three-phase DC motor.

3. COMMISSIONING OF DIGITAL ROLLING MILL DRIVE

Organization **: Seagull Technologies Pvt Ltd**
Client **:** M/S Keshav Metal Pvt Ltd (Aurangabad)
Duration **:** 5 months
Team members **:** Four
Role **:** * Testing and troubleshooting the PCBs.
* Designing the electrical control circuits.
* Assisting the technicians in the panel wiring.
* calibrating the measuring instruments.
* Programming the **PLC** controller.
* Calibrating the measuring instruments.
* Documenting the reports.
* Final commissioning of the panel at site.

Description **:** This is a typical DC drive used in rolling mills to maintain the thickness of the metals by compressing it between two rollers. PLC, Allen Bradley's Pico controller **L12AWA** and **L18AWA** are used in this project with 12/18 IO's respectively. Pico controller has on board LCD display and can be programmed easily either by serial port or by using the cursor button on its front panel. PLCs are mainly employed to reduce the relay logics and to get the optimum automation.

4. LIQUID LEVEL CONTROLLER

Organisation **: Seagull Technologies Pvt Ltd [Bangalore]**
Duration **:** 5 months
Team members **:** Four
Role **:** * designing the hardware
* simulating the circuit using **pspice**
* creating schematics using **orcad-capture**
* designing PCBs using **orcad-layout**

* testing and debugging the circuits
* Assisting the technicians in soldering and testing the PCBs

Hardware **:** CD4093, CD40106, LM 324.

Description **:** Here there is one tank and a water sources. If the water is low in the tank then the motor will start. But if the water in the sump falls below the safe level then the motor is stopped. and if the voltage level falls below or above the safe level the motor will be stopped .There are three modes of operation namely Auto mode, Manual mode and Need mode. By pressing the manual button the motor can be started/stopped manually irrespective of water level in the sump and tank. By pressing the need button the motor can be started until water level in the tank is filled.

5. DIGITAL FLOW CONTROLLER

Organization **: Seagull Technologies Pvt Ltd**

Client **:** MFAR Constructions Groups.

Duration **:** 5months

Role **:** * designing the hardware
* simulating the circuit using **pspice**
* creating schematics using **orcad-capture**
* designing PCBs using **orcad-layout**
* testing and debugging the circuits
* Calibrating the measuring instruments.
* Assisting the technicians in soldering and testing the PCBs

Hardware **:** CD4093, CD4060, CD4017, Cd4033, Thumb Wheel Switch.

Description **:** Used in RMCs to accurately time the flow of water. The CD4060 is an oscillator whose output frequency can be set using the formula T=2.2Rc. This frequency is fed to CD4033 which is a decade counter with built-in 7-segment decoder. The outputs from the seven segments are fed to a LS346 display chip to display the numbers visually. The same clock output of CD4060 is fed to a CD4017 "ring Counter". The output from the CD4017 is latched to the CD4093 through a thumbing switch to switch off the relay after the particular counts.

6. 3 PHASE CONVERTER

Organization **: Seagull Technologies Pvt Ltd**

Duration **:** 5 months

Role **:** * designing the hardware
* simulating the circuit using **pspice**
* creating schematics using **orcad-capture**
* designing PCBs using **orcad-layout**
* testing and debugging the circuits
* Calibrating the measuring instruments.

Hardware **:** PIC16F84, LM324, MCT2E, ULN2003, contactors, Capacitors.

Description **:** The 3 phase motor works only when there are all the 3 phases. When one of the phases is dead, the PIC16F87 senses it and switches on the RC phase shift circuit through relays, providing an extra phase, there by restoring all the 3 phases. MCT2E is used to isolate the high power inputs from the micro- controller. ULN2003 is used to provide isolation between the micro controller and the outputs.

7. MICROCONTROLLER BASED TELECONTROLLER

Organization **: Seagull Technologies Pvt Ltd**

Duration **:** 2months

Team member **:** four

Role **:** * Designing the hardware required for the microcontroller.
* Testing and troubleshooting the circuits.
* Writing the codes in assembly level language.

Description **:** A step in improvement of human-machine communication through telephone lines focusing on home automation. It deals with switching ON/OFF various home appliances through telephone line from a remote places using public switching telephone network as the medium of command using the telephone instrument. The system is designed to work using DTMF signals and pic microcontroller. The command consist of six numbers followed by '*****' or '#'. The first two digits tell what device is to be switch on/off, the next two specifies the time period. The '*****' pressed at the end tells the code is confirmed. The '#' pressed at the end tells that the code is wrong and has to be aborted.

8.ETHERNET DEVICE DRIVER USING POWER PC

ORGANIZATION : **CHIP INTEGRATION TECHNOLOGIES LIMITED**
DURATION : 8 MONTHS
ROLE : SOFTWARE PROGRAMMER
DESCRIPTION :The software is written in C language for fast Ethernet controller on red hat linux platform . object code is created by compiling with gcc utility of red hat linux. It is then cross compiled for power pc using hard hat linux tool . once the Ethernet device driver is up we can boot the target system with linux server which contains the power pc based application residing at another computer . Thus the device driver functionality can be tested and demonstrated.

Study Materials Developed:

- Laboratory manual for microcontrollers
- Laboratory manual for Advanced digital communication
- Laboratory manual for power electronics

Course Subjects Taught:

UG Level

- Analog Electronics
- Engg Electro magnetics
- Digital Electronics
- Signals & systems
- Digital signal processing
- Microcontrollers
- Microwave & Radar
- Microprocessor
- C++
- Operating systems
- Information theory & coding
- Power Electronics
- Digital Switching systems
- DSP Algorithms & Architecture

PG Level

- Error control coding
- Wireless communication

Student Project Guided:

UG Level (20)
PG Level (2)

Programs/ Seminars/ Conferences Organized:

- FDP at DBIT
- National Conference on Advancement in science , Engg & Technology at RRIT

Programs/ Seminars/ Conferences Attended:

- **FDP** at vachana pithamaha DR.P.G.Halakatti college of engineering and technology,BIJAPUR
- Current trends in signal processing at Jain university
- MSP 430 Microcontroller and programming at RNS institute of technology
- National conference on Advanced communication,VLSI Design and signal processing.

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