

RAKHI.R

02, Ground Floor, A Wing
Pooja Co-operative Housing Society
Opp. IIT Main Gate, Powai
Mumbai, Maharashtra
Email - rakhiwarriar@yahoo.co.in
Phone - 9820730585



EDUCATIONAL QUALIFICATIONS:

| COURSE | INSTITUTION | YEAR OF PASSING | PERCENTAGE/GPA |
|---|--|------------------------|-----------------------|
| M.Tech [Systems & Control] | Indian Institute of Technology, Bombay | 2014 | 9.0/10.0 |
| B.Tech [Electronics & Communication] | College of Engineering, Trivandrum, Kerala | 2007 | CGPA : 8.24/10 |
| A.I.S.S.C.E (CBSE) | Placid Vidya Vihar, Kottayam, Kerala | 2003 | 92.2% |
| A.I.S.S.E (CBSE) | Placid Vidya Vihar, Kottayam, Kerala | 2001 | 92% |

WORK EXPERIENCE: 40 months

1. INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY (August, 2010 – July, 2011)

- Research Assistant

Project: Remote Access Labs using Free and Open Source Software on:

1. Data Acquisition (DAQ):

- **Hardware :** Advantech PCI 1711, USB DUX FAST and various other DAQ modules
- **Software:** Scilab, COMEDI, HART Toolbox, Ubuntu 10.04 Linux
- Temperature measurement using RTD
- Developing signal conditioning and calibration circuitry and PCB based on op amps for RTD based temperature measurement
- Creating Spoken Tutorial on data acquisition through Scilab

- Worked with NI USB 6008 to acquire analog voltage inputs using Mandriva Linux and C

2. Single Board Heater System:

- Development of Scilab code for various Control Experiments
- Worked along with the software team to troubleshoot and solve online deployment issues of the lab, which was being accessed by over 100 students
- Prepared Specifications for Version 2 of the lab and deployed it successfully
- Created a Spoken Tutorial in Malayalam on Getting Started with Scilab
- Familiarised the software used in the Server – Client Setup and concepts of network communication
- Online support to students through Moodle

2. BHARAT ELECTRONICS LTD., CHENNAI (October, 2007 – December, 2009)

- Deputy Engineer, R & D Department
- **Project : Stabilized Optronic Pedestal (SOP) for Naval Guns**
- Worked as Project Lead
- **Responsibilities:**
 - Design, Development, integration and testing of the sub units of the SOP system, starting from PCB level
 - System integration
 - Technical support for the Indian Navy including troubleshooting and maintenance after the SOP has been installed on board ships of the Indian Navy
 - Preparation of Technical documents for the SOP system
 - Train the Navy Personnel on the use and maintenance of SOP system
- **Skills Acquired/ Used :**
 - Hands on experience in the use and testing of TMS320F240 DSP controller board for Motor drive applications
 - Worked with CPLDs for implementing the control logic in the Processor boards (Beginner)
 - Interfacing external devices like cameras, encoders and gyroscopes to the main processor
 - Knowledge of various technical drawings and documents

TECHNICAL & IT SKILLS:

- Programming Languages : C++
- Software: Scilab, MATLAB, Simulink, Orcad Capture, Code Composer, Eagle, Arduino IDE, KiCad, Ngspice
- Linux Operating Systems : Ubuntu, Open Suse, Mandriva

TECHNICAL PAPERS & PROJECTS:

- **Line Follower Robot:** Won first place in the line follower robot competition held at IIT Bombay.
 - Hardware : Arduino Uno, Sensor circuitry using IR LED, IR Photodiode and LM 324, Motor drive using L293D, 12 V DC motors
 - Software : Arduino IDE
- Inderpreet Arora, Kannan M. Moudgalya, Kaushik Venkata, Victor Chakraborty, Rupak Rokade and Rakhi R., “**A low cost, scalable, virtual control laboratory**”, Accepted for presentation at IEEE International Conference on Control & Automation, Chile, 2011
- Navas K A, Nithya V S, Rakhi R, Sasikumar M, “**Lossless watermarking in JPEG2000 for EPR data hiding**”, Proc. IEEE-EIT 2007, Chicago, USA, 17-20th June 2007, pp 697-702.
- **B.Tech Main Project:**
Analysis of Medical Image Watermarking (MIWM) Algorithms - Analyzed the existing MIWM algorithms by simulating in MATLAB and proposed a novel and effective scheme for EPR (Electronic Patient Record) data hiding.
- **B.Tech Mini Project:**
Electronic Stethoscope – A hi-tech gadget than can detect barely audible whispers and throbs of the lungs and heart.

ACADEMIC ACHIEVEMENTS:

- Secured AIR 223 (Score: 796) in GATE, 2011
- Participated in Technical Paper Presentation in the National Level Technical Festival-Drishti '05.
- Participated in Technical Paper Presentation in the ISTE Meet, '05.
- Merit Award for being School Topper in A.I.S.S.E 2001 and A.I.S.S.C.E 2003.
- Award of Merit from CBSE Delhi for being in top 0.1% successful candidates of AISSE-'01.
- Kairali Vigjana Pareeksha (State level)-A grade with cash prize.

PERSONAL PROFILE:

Age and Date of Birth : 26 years, 06-11-1985

Languages Known : English, Hindi, Malayalam, Tamil

EXTRA-CURRICULAR ACTIVITIES:

- Department Student Co-ordinator, Techconnect 2011
- Co-ordinator – Electronics Hobby Workshop – with Treelabs at IIT Bombay
- Speaker at the Workshops on DAQ and Scilab organized at various colleges in Mumbai and at IIT Bombay
- Reviewer of Spoken Tutorials (Malayalam version) on Scilab, Linux etc.
- Member of ISTE (College of Engineering, Trivandrum).
- Member of the Organizing Committee – Dyuthi'06
- Active participant in the cultural activities at college.

- 'Kalathilakom' in CBSE Zonal Cultural Fests-1999, 2001.
- Second prize in dance in the All Kerala Inter School Cultural Competition,'98
- Best Actor Award in the Inter House Drama Competition at school.
- School Leader.
- House Captain at school.