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	**--**
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, LTSPICE, MATLAB, Simulink, Orcad Capture, Code Composer, Eagle, Arduino IDE, KiCad
- 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 : 25 years, 06-11-1985
Languages Known   : English, Hindi, Malayalam, Tamil

EXTRA-CURRICULAR ACTIVITIES:

- 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
- Member of the Kerala Philately Club.
- 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.