SHANTHARAM BALASUBRAMANIAN

80-A, Cedar Lane, Highland Park, NJ-08904.
7325436863 : shantharampsg@gmail.com

CAREER FOCUS

Highly motivated and hardworking college graduate with basic knowledge and hands-on experience about networking and programming looking for a full-time position in the field of computer engineering.

EDUCATION

- Completed undergraduate (B.E.) in Electronics and Communication department in PSG College of Technology, Coimbatore-641 004 with a GPA of 3.39 out of 4.
  Graduation date: May 2009.

- Currently pursuing M.S. in Electrical and Computer Engineering in Rutgers University, holding a GPA of 3.75 out of 4.
  Graduation date: Oct 2011.

RELEVANT COURSES

Undergraduate
Computer networks, Network security, Data Structures, Digital Communications, Satellite Communications, RF circuit design, Embedded systems, Digital Signal Processing, Telecommunications systems, Object Oriented Programming.

Graduate
Communication networks I, Stochastic signals and systems and Computer architecture.**(I SEM)**
Communication networks II, Software engineering 2 and data structures.**(II SEM)**
Software engineering I, Programming in finance**(III Sem)**
Wireless communications, Computer Info and Systems(IV Sem)

TECHNICAL SKILLS

- Programming languages: C, C++, MATLAB, assembly language program for 8085 and 8051, HTML, Python.
- Platforms: Windows XP/VISTA, Ubuntu.
- Software packages: MATLAB, VHDL, Verilog.

SUMMER INTERNSHIP

- Currently I am working in WINLAB in a project called Bandwidth and Time Exchange. It is about studying the effect of **relay cooperation** in wireless communications, by simulating in ORBIT using GNU radio based USRP2 testbed and by programming in **Python**.

TECHNICAL CERTIFICATION

- CCNA (Cisco Certified Network Associate)

PROJECT WORKS

Undergraduate

- Have done a project presentation regarding **edge detection** which is a part of image segmentation in the Digital Signal Processing subject. Used MATLAB for simulation and results. I, along with my project mates applied this edge detection on several archaeological and medical images to demonstrate and study the benefits of edge detection.

- Simulated a stop clock in **8085 microprocessor kit** by programming in assembly level language during my second year of undergraduate study as a lab mini project.

- Designed and simulated an **RF reflective type phase shifter** which is used in antennas and satellites as my final year project using ADS(Advanced Design System). We designed this phase shifter for WLAN (2.45GHz) applications and we used hybrid coupler. PIN diodes were used as reflective loads. We simulated a phase shift of 90° and 180° and we also tried to miniaturizing phase shifter by using miniaturized coupler such as Koch hybrid coupler.

Graduate

- Have implemented a client/server mode of connection in MS-WINDOWS operating system, using C programming language. A file transfer, between two different computers, each of which was separately running the server and the client program, was done successfully. Some text was also made to bounce, to and fro among the two computers using the same program.

- Did project presentation about **IPSec/SSH.** We presented about the basic protocols of IPSec suite such as AH, ESP and IKE. We also did presentation about the two different modes in IPSec and implementation of IPSec policies. We implemented a client/server mode of connection between two systems using sockets and simple encryption algorithm, using C as programming language in Ubuntu operating system.

- Have done project presentation in the subject of **stochastic signals and systems** about statistical modeling of soccer and football using poisson distribution and Brownian process respectively. We then defined our own formula for deriving the probability of equivalent leads for a team to win in both the games, by considering various factors which affect the games. We took statistics of both the games by considering a particular season.

- Simulated a file transfer between a client and server using **stop-and-wait ARQ** scheme, by dividing the file into a number of packets. This project was done using C++ programming language. This project was implemented in Ubuntu platform.

- Simulated a router configuration using C++ in Ubuntu platform. This project involved connecting multiple routers and users to form a network which could do **unicasting, multicasting and broadcasting**. This project involves the usage of multithreading in C++.

- Simulated an **account management system** which manages a stock portfolio account and a bank account by using stock information stored in a text file. Results were stored and updated in text files and were also plotted by linking matlab and C++.

ACTIVITIES

- Member, IEEE student chapter 2005-2007.
- Event manager in Kriya'09 an inter college technical competition during my undergraduate.