

DINESH SURA

CAREER OBJECTIVE

To obtain a position in a company that will enable me to utilize my skills as an Embedded engineer and work in a competitive environment to gain expertise, pursue adaptability and obtain industrial experience to achieve my career goals.

WORK EXPERIENCE

Currently undergoing hands-on technical training program - **Emertxe Certified Embedded Professional (ECEP)** at Emertxe Information Technologies (<http://www.emertxe.com>), Bangalore.

TECHNICAL SKILLS

Programming Languages:

- ✓ Shell scripting
- ✓ C Language
- ✓ Data structures & Algorithm design

System programming:

- ✓ Linux Kernel system calls
- ✓ IPC mechanisms - Pipe, FIFO, Shared memory
- ✓ Network Programming using TCP and UDP sockets.
- ✓ pThreads - Multi thread programming.

Embedded controllers:

- ✓ Hands-on working with GPIOs, interfacing, character LCD
- ✓ Peripherals usage - Timers, Counters and Interrupts.
- ✓ Communication protocols - UART, SPI, I2C.

Development environment and tools:

- ✓ Dev environment: Vim, Makefiles
- ✓ Compilers : GCC.

COURSE WORK

- ✓ Wireless Networks
- ✓ Microprocessor
- ✓ Image processing

PERSONAL ATTRIBUTES

- ✓ Quick learning of new initiatives
- ✓ Ability to meet deadlines through effective time management
- ✓ Ability to work effectively under pressure
- ✓ Team player with work ethics, committed to work hard and sincere

EDUCATION

M.E (Embedded Systems) from Sathyabama University, Chennai 2015 with CGPA - 7.40.

B.E (Electronics & Communication) from S.A Engineering College (affiliated to ANNA UNIVERSITY), Chennai 2013 with CGPA - 7.04.

HSC from Vivekananda Higher Secondary School, Namakal 2009 with 84.07%.

SSLC from T.N.P.L Matriculation & Higher Secondary School, Karur 2007 with 76%.

ACHIEVEMENTS

- ✓ Presented International conference ICMS 2014 on topic “Software Configuration Polyphase Channelization Architecture by Using Interpolation for SDR Application”.
 - ✓ Presented International Conference ICIECS'15 on topic “Enhanced Spectrum Optimization of Cognitive Radio”.
 - ✓ Attended workshop “Wireless Sensor Network and Green Telecom Networks” Conducted by The Institution Of Electronics And Telecommunication Engineers.
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PROJECT DETAILS

Title TCP/IP CHATTING

Project brief To develop client/server TCP/IP Chatting using Linux Sockets with C, by authenticating the clients with the server and server will authorize clients to communicate between them.

Technologies used C language - Functions, Files, string library, Structures.
Linux Internals - Sockets, system calls, Threads.

Key challenges & Learning's

- ✓ Create the socket between different system
- ✓ Concurrent chatting between server and clients.
- ✓ Connecting the clients in between server.

Title CAR BLACK BOX

Project brief The Car Back Box used to log the event activities which could be investigated upon crash. The application could be extended to any transportation system.

Technologies used C language, string operations, Bitwise operations.

Key challenges & Learning's

- ✓ LCD configuration
- ✓ ADC configuration
- ✓ Timer configuration

Title TEXT INDEXER

Project brief The Technique of searching a single document or a collection of documents or in database for a particular text.

Technologies used C language - Functions, File I/O operations, File pointers, string operations, Structures.
Data Structures - Hashing and Linked List.

Key challenges & Learning's

- ✓ The use of Hashing Concepts.
- ✓ The use of Linked list and its operations.
- ✓ The use and implementation of Makefiles.
- ✓ Identifying words in files or database and update data in hash table using structure.

Title	IMAGE SETGANOGRAPHY
Project brief	The art and science of hiding information by embedding messages within other, seemingly harmless messages. Bits of unused data are replaced by bits of valuable information.
Technologies used	C language - Function pointers, File I/O operations, File pointers, string operations, Bitwise operations.
Key challenges & Learning's	<ul style="list-style-type: none"> ✓ The use of file pointers and File operators. ✓ Byte wise and bitwise manipulation of data by declaring a local buffer to encrypt and decrypt data. ✓ The use and implementation of Makefiles.
Title	ENHANCED SPECTRUM OPTIMIZATION OF COGNITIVE RADIO
Project brief	Cognitive radio is an intelligent radio transceiver that can automatically detect unlicensed spectrum in wireless network. Spectrum is optimized to achieve the maximum utility by using multipath routing technique.
Technologies used	Network Simulator-2.
Key challenges & learning's	<ul style="list-style-type: none"> ✓ Set the node with the bandwidth and creating the path between the node. ✓ Set the node with particular position and creating the path with the distance. ✓ Function declaration and linking the function based on number of parameters.
Title	DETECTION AND TRACKING OF TRAFFIC SIGN IN VIDEO SEQUENCES FOR AUTOMOBILE MOBILITY CONTROL
Project brief	It is detection of traffic sign for controlling automobile according to its direction by using OpenCV library in visual studio software and algorithm is efficient for object tracking with its highspeed.
Technologies used	Visual Studio, OpenCV library, Keil.
Key challenges & learning's	<ul style="list-style-type: none"> ✓ Faced during the assembling of the hardware components and got repairs during dumping the code. ✓ Faced problem in dumping the code based on memory size of the chip used for it.