

HARSH RATHOD

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CAREER OBJECTIVE

Highly motivated and professionally trained Electrical Engineer with extensive experience and practicum seeks a position within the industry where specialized skills and abilities can be used to contribute in the development of technology and serve the organization with my algorithms, designing and networking knowledge which would enhance the growth of organization.

EDUCATION

Northwestern Polytechnic University, Fremont, CA 3.78 / 4.0 GPA Jan 2015-Aug 2016

Master of Science (MS) in Electrical Engineering

Relevant Courses: FPGA, Design verification with System Verilog, Digital Design and HDL, Network Security Fundamentals, Network Analysis and Testing, Advance Network Management, Mobile and Wireless Communication, RF system Analysis and Design for Wireless Systems.

G. H. Patel College of Engineering and Technology, Gujarat 6.62 / 10.00 GPA Jul 2010-May 2014

Bachelor of Engineering (BE) in Electronics and Communication Engineering

Relevant Courses: Fundamentals of Image Processing, Digital Signal Processing, VLSI Technology and Design, Data Communication and Networking, Digital Communication, Wireless communication, Control Theory.

EXPERIENCE

Northwestern Polytechnic University, Fremont, CA Apr 2016-Aug 2016

Role: Grader

Responsibilities: Grade homework, quiz, Assignment.

- Exam Supervisor.

Supernova Technologies PVT. LTD. Gujarat, IN May 2013-May 2014

Role: Electrical Engineer

Description: A project was based on operating and controlling solar power system remotely using SCADA and DTMF. An automation of solar power system is done using SCADA, also different communication and controlling parameters were analyzed. Moreover, the plant is remotely operated by DTMF.

Responsibilities: Older versions of solar power plants were facing a problem that due to various weather conditions incident rays with solar panel is more than zero degree, as a result the power generation is not efficient.

- To overcome this problem, I have built a dual axis solar tracker along with solar charge controller to maintain the angle of incident rays.
- Responsible for interfacing between SCADA and Solar Tracker, with the help of SCADA electrical parameters like: Frequency, Line and Phase voltage, Phase Current, PF, KW and KVA has been monitored and audited remotely.
- Responsible for interfacing DTMF with Solar Tracker to operate the power plant remotely, DTMF tone is generated when the user pushes the mobile phone keypad buttons connected to a remote mobile.
- Interacted with various members of project team to discuss and resolve defects and to determine their priorities. In a nutshell, the solar power plant was successfully operated and controlled remotely.

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ACADEMIC PROJECTS

Image processing using Zybo (Xilinx Zynq 7000) FPGA/SoC Board

Apr 2016

- By running Image processing sample application (Sobel and Gray Scale filters) on processor vs. the FPGA fabric we have proved that there are performance gains in FPGA fabric. As mentioned in HW accelerated performance results there is 13.5 million cycles of CPU are saved by implementing Sobel filtering function into FPGA hardware

Encryption and Decryption of Input text

Sep 2015

- An Encryption and Decryption program is developed for security purpose. When a message is sent it is encrypted and securely transmitted to the receiver with the security key and then that message is decrypted and desired message is received.

An ACLR filter using MATLAB

May 2015

- An ACLR filter is designed and tested by different sampling rates and different windows were used to test it. As a result show up as a magnitude response, phase response, impulse response and pole and zero plot.

Electronic siren with voltage regulator using IC741 (Op-Amp) and LM317

Jul 2013

- Using voltage regulator a regulated voltage supply is used as an input of electronic siren and two IC741 is used and this IC741 works as a frequency multi-vibrator and as a result it produces a high-frequency tone and at the output, it produces a loud siren.

1-10 minutes adjustable timer using IC555 (Timer IC)

Aug 2012

- In the project two LEDs (green and red) and one variable resistor is used. The time period is set by adjusting the variable resistor. The green LED turns on to show that timing is in progress. When the time period is over the green LED turns off, the red LED turns on and the beeper sounds.

SKILLS

Programming	HTML, C, JavaScript, CSS, jQuery
Database	SQL Server, Oracle
Simulating Tools	Multisim, PSpice
Tools	Xilinx-Vivado, VHDL, RTL Coding, SCADA, DTMF, X Manager, MATLAB
Networking Tools	Cisco Packet Tracer, Wireshark
Operating Systems	Windows 2000, XP, Vista, Windows 7, Windows 8, Windows 10 and IOS
Other Tools	Arduino, Notepad++, Adobe DreamWeaver
MS Office	MS Word, MS Excel, MS Power-point, MS Access, MS Visio

OTHER SKILLS

Leadership – Team Player – Time Management – Quick Learner – Attentive to Detail – Adaptable

INTERESTS

Photography – Soccer - Adventure Travel – Dance