

Arwa Arif

Undergraduate Sophomore

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Education

- 2012 - present **B.Tech. in Electronics and Communication Engineering** (International Institute of Information and Technology-Hyderabad).
- 2010 – 2012 **Secondary schooling(CBSE)** at ILVA Higher Secondary School, Indore, (Class 12th – 87%)
- 1998 – 2010 **Primary schooling(CBSE)** at Queens’ College, Indore, (Class 10th – 9.6 CGPA)

Major work undertaken and Projects

Research Assistant (under Dr.Subajit Roy Chowdhary)
IIIT –Hyderabad.
The research aims at design of Digital Systems using Verilog.

Imagica

A python application that converts speech to a stream of images targeted for helping deaf people and for enhancing education for small kids. This was developed at a hackathon in Google and won 2nd position in Hyderabad.

Yoga Classes

This project uses kinect to detect the poses of the user and compares it with the standard database, and guides the user to do the pose correctly. This project was done during the MIT-MediaLabs Workshop 2014 held in Mumbai. OpenCV library was used during this project.
Mentor: Ermal Dreshraj, Nikhil Naik.

Electronic Scoreboard

A low power battery operated electronic display system that is visible over 100mX100m square area.
Mentor: Prof. Jayanthi Sivaswamy

Time efficient Processor Design

A simple processor, that tries to optimize the performance by getting more computation done in fewer cycles. This processor design was implemented on Xilinx FPGA.

Electronic Security System

This system sets an alarm whenever anyone other than the house members enters the place. At the same time, it closes the latch of the main door and sends a message to the nearest police station.
Mentor: Prof. Vijay Sankar Rao

Maze

A 3-d maze game built on Unity.

Graphics API

Used GLU/GLUT library for developing game with modeling, viewing, projection and viewport manipulations in C++.

Data Structures Project

Implementation of Red-Black Tree.

Mathematics Project

A brief research on the trajectories of solar bodies.

Voltage Regulator Project

A voltage regulator that uses very less power, and has a good regulation even when the load drops below 10ohms. It is implemented using Buck Converter.

Mentor: Prof. Madhava Krishna

Magnetic Levitator

Suspending objects in mid air using magnets. Implemented using the "Hall Effect".

Skills

Programming:	GNU C/C++, Python, Shell(Bash), ARM assembly(elementary)
Hardware Description Language:	VHDL, Verilog, Cadence
Embedded:	Digilent Nexys 2, ATMEGA16, Arduino, Raspberry pi, Kinect
Testing:	Multisim, Simulink, ModelSim.
Programming/Computing environment:	MATLAB, MS VisualStudio, WinAVR, XILINX ISE.
OS:	Linux, Windows
Libraries:	OpenGL, OpenCV
IDE:	Vim
Web Tech:	HTML 5
Other:	Latex

Communication Skills

School-level Debating and declamation

School/college Compering various events

Courses Undertaken

Systems Courses:

Computer Systems Organization, Digital Logic and Processor, Engineering systems.

Theoretical Courses:

Probability and Random Processes, Data Structures

Foundation Courses:

Computer Programming, Basic Electronic Circuits, Linear Electronic Circuits, Signals and Systems, Communication theory, Introduction to VLSI, Digital signal processing, Electronics Workshop II

Other Courses:

Electrical Science I, Electrical Science II, Science I, IT Workshop I, Electronics Workshop-I, Mathematics, Algebra, Introduction to humanities.

Other Interests

- Active member of Literary Club, Dance Club, Adventure Club and Movie Club.
- Swimming and playing badminton.

Declaration : I hereby declare that the above information is correct to the best of my knowledge.
Last updated : March 18, 2014.