JITESH DAMANI

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EDUCATIONAL QUALIFICATIONS

Year	Degree/ Certificate	Institute/ School, City
2014 (expected)	Bachelor of Technology, Electrical Engineering	Indian Institute of Technology, Kanpur
2009	C.B.S.E. (Class XII)	DAV Public School, Kota
2007	C.B.S.E. (Class X)	Maharishi Vidya Mandir,Bilaspur

TECHNICAL SKILLS

- **Languages:** C, C++, Python
- **Image Processing:** OpenCV, MATLAB
- **Other tools:** Verilog, GNU Octave, Open CV, Android SDK, Kinect SDK
- **Operating Systems:** Windows, Linux, Android
- **Simulation tools:** Proteus ISIS, Spectrum Micro Cap
- **Embedded Programming Tools:** AVR Studio, CodeVision AVR, MPLAB IDE

PROJECTS

Summers 2012

Computer Vision based Lighting Control System

Prof. K.S.Venkatesh , Department of Electrical Engineering, IIT Kanpur

- Developed an intelligent system to reduce Power Wastage in public places like libraries, halls etc
- Real time image was processed to distinguish between areas of high and low human activity
- A regulator to control the Light intensity for fluorescent lamps was developed which was integrated with camera to self adjust the light intensity reducing the power loss significantly

Nov 2012-Ongoing

Real time Foreground Segmentation in Videos

Prof. K.S.Venkatesh , Department of Electrical Engineering, IIT Kanpur

Objective: Achieving robust **foreground segmentation** in videos with **non static background**

The problem of distinguishing the foreground objects from the background is being widely researched upon. Our work thus far has been the **segmentation in still images** through **alpha-matting**. However, the method is not real time when applied to unseen and potentially **non-static backgrounds**. The ongoing work seeks to develop algorithms suitable for the same

Summers 2011

Guitar Effect Synthesiser

*(Project done under the guidance of **Electronics Club, IIT Kanpur**)*

Objective of the project was to create a Guitar effect Synthesiser through **Signal Processing Implementation on an Atmega** 32 microcontroller; processed signals generated by guitar to produce effects and improve the sound; genarated Effects like **Reverb, Echo, Distortion and Tremolo**

January 2011

Wireless Remote Control for Robot

(The project is a solution to a Problem statement for the event Electromania, at Techkriti 2011, IIT Kanpur)

Objective of the project was to build a Infrared sensor based **Wireless remote control** for the robot

- Designed an embedded controller using an **Atmega-32**, **Infrared sensors** and a 2-wheel driven robot that would be controlled by the above controller
- Extracted **sensor data** to estimate the desired motion for the robot

Nov 2010

Implementation of 'Car and Ramp' game on LED matrix

Essence of the game was to prevent a car falling in to a pothole by launching a ramp at the correct instant, using **LEDs**. Developed a breadboard circuit consisting of analog and digital circuitry to implement the game. Features like **acceleration of car, gravity effect on ramp, multiplayer** were implemented.This circuit got **1st position** among the top 20 finalists in the **Electronic Circuit Design Competition at IITK**

Aug 2011-Oct 2011 **Gear-based model of 'Mechanical Thresher'**
(Course project in TA201: Manufacturing Processes – Mechanical Engineering)

- Created a **mechanical device** that would reduce human effort in threshing the grains using simple **gear mechanisms**
- The device converts the motion of the hand to simultaneous rotation of the sieve and the blade, about different axes so as to thresh the grains

RELEVANT COURSEWORK

Signals and Systems	Analysis of Control Systems
Principles of Communication	Digital Signal Processing
Introduction to Electrical Engineering	Power Systems
Fundamentals of Computing	Data Structures and Algorithms
Microelectronics-I (Analog Circuits)	Microelectronics-I (Devices)
Integrated Circuit Fabricaton Technology	Digital Electronics
Communication Systems	Lab on Control Systems, Electronic circuits and EM Machines

AWARDS & ACHIEVEMENTS

- Secured a rank of **420(99.91 percentile)** out of **500 thousand** in Joint Entrance Exam of **IIT** in 2009
- Secured **99.89 percentile** among **1 million** people in All India Engineering Entrance Exam **(AIEEE)** 2009
- Secured **31st** rank in State level Engineering entrance exam in which around **100 thousand** people appeared in 2009
- Received certificate of merit from C.B.S.E. for scoring **100%** in mathematics in AISSCE (Class 10)
- Recipient of Merit Cum Means Scholarship at IIT Kanpur

POSITIONS OF RESPONSIBILITY

- **Coordinator, Hospitality Cell, Antaragni'12 – Inter Collegiate Cultural Festival, IIT Kanpur *(2012-13)***
  Leadership
  - Spearheaded **Antaragni's biggest cell**; a **3-tier** team of **110** individuals, ensuring **most diverse** turnout ever
  - Revamped calling strategy-ensuring **unprecedented participation** from Gujarat, Punjab, Rajasthan, WB and Delhi-with **YOY** increase of **50%,** expanding the reach of **'Brand Antaragni'**

  Initiatives
  - Conceptualised **first of its kind** web portal to streamline information dissemination of registrants
  - Emphasising on **post festival logistics management** reduce the **lead time** from 5 months to 2 months

- **Team Mentor in Alumni Contact Program, IIT Kanpur.** ***(May'10-August'12)***
  - **Mentored** a team of **6** people to initiate them to Alumni Contact Program
  - Established contact with IITK Alumni worldwide to reconnect them to institute

EXTRA-CURRICULAR ACTIVITIES

- **Android Application, ^!SOS!^, Yahoo HACK U, 2012** ***(August 2012)***
  - Developed an application for sending Emergency messages.
  - GPS, GPRS, SMS and google map technology were used.
  - Secondary features for inquiring about a particular query in a given location.
- Passion for speed cubing
  - National Ranking in 3x3x3. Can solve the cube using different Algorithms with in 35 seconds.
  - Conducted workshops with over 150 people to help people solve 2x2x2, 3x3x3, 4x4x4.
- Passion for **Adventure and Trekking.** Been on trek to **Har Ki Doon**,Garhwal Himalayas.
- Interest in **Table Tennis** , was trained under the guidance of Institute Table Tennis coach for a year.

REFERENCES

Dr. K. S. Venkatesh, Professor
Department of Electrical Engineering, IIT Kanpur
Webpage: http://www.iitk.ac.in/ee/faculty/venkats/index.html