

DEEPAK PAL

Project Associate
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CAREER VISION

To work in a challenging environment demanding all my skills and efforts to explore and adapt myself in different fields and realize my potential where I get the opportunity for continuous learning

RELEVANT EXPERIENCE

Department of Electrical Engineering, Indian Institute of Technology, Kanpur, India

Dec, 2010 – Present

Project Associate

Prof. Aditya K. Jagannatham, Multimedia Wireless Networks Lab, IIT Kanpur

- Developed robust MPEG encoder in MATLAB and C that performs streaming of live videos over wireless network
- Set up a wireless link, supporting radio data rate up to 250 kbps for transmission of images and small sized video using TELOS B nodes on TINY OS platform using JAVA
- Developed H.261 video encoder and decoder on MATLAB Platform
- Performed study of JSVM (Joint Scalable Video Model) for h.264 compliant bitstream generation and transmission
- Currently developing H.264/SVC codec to achieve video streaming of live events on IIT Kanpur campus wireless infrastructure

Department of Electrical Engineering, Indian Institute of Technology, Kanpur, India

Aug, 2010 – Nov 2010

Project Fellow

Prof. Aditya K. Jagannatham, Multimedia Wireless Networks Lab, IIT Kanpur

- Developed GUI for transmission and reception of digital images over AWGN and RAYLEIGH channel with noise filtering mechanism at the receiver on MATLAB Platform
- Performed extensive work in video motion estimation, morphological image processing, aliasing, transform coding, 2D sampling, filtering and interpolation
- Developed JPEG encoder and decoder on MATLAB platform

TECHNICAL SKILLS

Languages

- | | | |
|--------------------------------------------|--|------------------------------|
| • MATLAB (EXPERT, 3 Years) | | C (ADVANCED, 2.5 Years) |
| • HTML, CSS, JAVASCRIPT (MEDIUM, 6 months) | | Verilog (FAMILIAR, 3 Months) |

Tools and Libraries

- | | | | | | | | | |
|--------------------------|--|---------|--|-------------|--|------------|--|--------|
| • Visual Studio | | Eclipse | | Dreamweaver | | Xilinx IDE | | Cygwin |
| • GNU Scientific Library | | Open CV | | JRTP | | | | |

Operating Systems

- | | | |
|--------------------------|--|----------------|
| • Windows - 7, Vista, XP | | Linux – Ubuntu |
|--------------------------|--|----------------|

EDUCATIONAL QUALIFICATIONS

Bachelor of Technology in Electronics and Communication Engineering (UPTU, Percentage - 70.02 %)

Galgotias College of Engineering and Technology

Aug 2006 – Jun 2010

Intermediate (UP Board, Percentage – 79.4 %)

Lucknow Public Inter College

May 2004

High School (UP Board, Percentage – 65.8 %)

St. Peters High School

Jun 2002

PROJECTS

MULTIMEDIA TRANSMISSION OVER WIRELESS

Nov 2010 – Present

Details

- Objective - Implement a video coding standard to enable transmission and unpacking at multiple spatio-temporal resolutions with varied bitrates so as to make video streaming readily suited for wireless networks
- Sponsor company – BSNL India

Role

- Developed MPEG encoder with scalability feature. Generated bitstream can be decoded up to 3 spatial resolutions depending on the receiver requirement and bandwidth availability
- Added RTP functionality to encoder using JRTP library so as to complete a working model of the SVC codec for video streaming of live events on the IITK campus wireless infrastructure
- Platform – Linux/Windows | Tools – Eclipse/Visual studio | Language – C (Started with MATLAB)
- Libraries – Open CV, JRTP

ACADEMIC PROJECTS

Moving Object Tracking Using MATLAB (Guide: A.Prof Navneet Sharma, Dept. of ECE, GCET)

Mar 2010 - May 2010

- Designed and constructed moving object tracking system on MATLAB with ATMEGA 16 microcontroller controlled movable webcam

Speed Control of Permanent Magnet DC Motor

Feb 2010 – Mar 2010

- Constructed and designed microcontroller based speed control system for permanent magnet DC Motor

Micromouse

Nov 2009 – Jan 2009

- Constructed an autonomous robot capable of solving mazes with the help of IR sensors using ATMEGA 16 microcontroller

Line Follower

Feb 2008- Mar 2008

- Constructed an automatic robot capable of traversing black line on white background using microcontroller ATMEGA 16

Biogas Engine for Rural Transformation (Mentor: Prof G.P Govil, H.O.D, Mechanical Engg, GCET)

Sep 2007- Nov 2007

- Worked on a business model which can be implemented in rural sector for employment generation and solve as well as energy problem using biogas

TRAININGS

Bharat Sanchar Nigam Limited, Mahanagar Telephone Exchange, Lucknow

Jun 2009 - Jul 2009

- Undergone summer training on working of telephone exchange

Training on MATLAB SOFTWARE from QMS Softech Pvt. Ltd., Lucknow

Jun 2008 - Aug 2008

- Undergone summer training on basic knowledge of MATLAB Software

Micro Small & Medium Enterprises Development Institute (Govt. of INDIA), New Delhi

Feb 2010- Mar 2010

- Undergone training on BUSINESS SKILLS DEVELOPMENT PROGRAMME on basic qualities of an entrepreneur & how to set up an enterprise

PAPER PRESENTATION

- Published a national level technical paper on '**Electromagnetic Suspension**' in **The 3rd CSI National Conference on Education & Research** sponsored by IEEE & CSI at Jaypee Institute of Eng. & Tech. Guna Mar – 2010
- Published a national level technical paper on '**Moving Object Tracking Using MATLAB**' at LNCT, Bhopal Mar - 2010

POSITIONS OF RESPONSIBILITY

General Secretary, GNIX (Student Based Electronic Society of College)

Aug 2008- May 2009

- Organized events: BULLZ AND BEARZ (Virtual stock market event), SKEP TORING (To build structure using provided material), YAMAHA DAY, QUIZ, Technical Paper presentation
- Organized Industrial Trip to NTPC Dadri
- Conducted hand's on workshop on Robotics
- Inspired students for experimental learning attitude towards engineering

Coordinator (Metal Storm - Inter College Robotic Event) for Gladiator '08, annual Technical Festival

Apr 2008

- Managed overall task for successful conduction of the event

ACHIEVEMENTS & PARTICIPATION

- Won 1st prize in 'SAVIOR SENSE', a manual robotic event at TECHKRITI '08, Technical festival of IIT Kanpur
- Initiated a technical environment in the college** by introducing technical competitions like '**GLADIATOR**', a Manual Robotics competition and various technical competitions for the first time. **Ensured high participation** of students respectively
- Won 1st prize in an Advertising event at GCET organized by NATIONAL ENTREPRENEUR NETWORK(NEN) Feb 2009
- Won 1st prize in 'DEXTERITY- Assembling & Disassembling of Machines' at GCET Mar 2007
- Secured RUNNER UP position in 'CAPTIVITY' event at GCET May 2009
- Participated in TECHKRITI '08, Technical festival of IIT Kanpur Feb 2008
- Participated in robotic event at SHAASTRA '07, Technical festival of IIT Madras Sep 2007
- Participated in Techfest NEXUS 2007 at MNIT Jaipur Sep 2007

HOBBIES

Reading Books | Internet Surfing | Solving Sudoku | Listening to music

Kanpur, UP

Date:

(Deepak Pal)