Dronacharya College of Engineering

ISSUE

COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

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From Editor's Desk :

We wish you an exhilarating, enriching, heartening, thrilling and fabulous New Year. To welcome the eve of 2010 the sparrows have started chirping, the dawn has broken, wave after wave of breeze is blowed and the sweet music of divine nectar dripping in our consciousness becomes distinctly audible.

Let's dream and learn to complete,
Let's complete and learn to achieve;
Let's achieve and learn to lead.

Dronacharya College of Engineering is a leading contender for a world-class institution which has contributed immensely towards promoting excellence in Engineering and Technology to meet the Social and National needs and International Standards.

Our College has hues for Focus and Achievement, which imparts a natural impetus towards students' quest for Excellence. ***On 18th day of December 2009, a Memorandum of Understanding was signed between IBM and Dronacharya College of Engineering, Farrukhnagar, Gurgaon***. This tie-up ensures effective and sustainable programmes through emerging technologies and softwares.

We feel proud to be associated with IBM. For this achievement we are beholden to our ***Hon'ble visionary Chairman, Dr. Satish Yadav***, for paying everything back what the society and world bestowed upon him. No words can express our deep thankfulness for his gracious concern and solicitude, all unspoken:

Har ik pe yoon girti hai, teri nazar se pyaar ki shabnam;
Banjar zameen par jaise, barkha barse, ruk ruk tham tham.

May this New Year fill your heart with new hopes, open new horizons and bring challenges and promises of brighter tomorrows!

Lakh Khusiyan patshaian, je Satguru nadar kare.

Editor, (Dr. Sunil K. Mishra)

From HOD's Desk :

CSE & IT Department is scaling new heights slowly and steadily. To make our students professionally competent, we provide innovative, qualitative technical education that helps students to enhance their knowledge and boost their confidence. For the professional competence of the students the department also organizes TGMC (**The Great Mind Challenge**), a training program cum competition in collaboration with IBM.

The Department has a rich and very attractive history of producing maximum number of **University toppers and rank holders**. We have **27 merit holders** in the university examination of **May 2009**. As academia is always on our priority, we have started extra classes on Saturdays to retain our top positions in the University.

CSE & IT Department also celebrated **TEACHERS' DAY** on **5 September 2009**. It was, indeed, a very cheerful celebration for both the faculty members and students of the department. The event was managed by the final year students. We celebrated this day in the august presence of **Hon'ble Principal Prof. (Dr.) B. M. K. Prasad**, **Dean(Academics) Prof. (Dr.) Onkar Singh** and all **HODs**. The students greeted all faculty members and the authorities with bouquets and gifts as a mark of their **Guru Dakshina**. The students also announced interesting titles for each faculty and staff member.

Our College has been chosen for conducting the prestigious **ONLINE ENTRANCE TEST** for the **CAT-2009**. It was a great privilege, a big opportunity and a task of immense responsibility for all of us. All the team members put tremendous effort and made this event a huge success. Our test center was among the **Top 3 centers of the country**. I congratulate the team members for making this event a huge success.

Department of CSE & IT always takes initiative to make the students more industry fit and as a result IBM Center of Excellence was inaugurated on 18th Dec 2009 in our college campus. This center will facilitate our students in learning new technologies and will help the staff & students in learning new technologies from IBM.

I wish all the best to all the students for the upcoming semester and wish a very happy new year to all **DRONACHARYANS**.

Head of the Department, (Prof. (Dr.) Jitender Kumar)

Common Admission Test (CAT) 2009 :

CAT has become one of the most competitive exams to assess the potential of the candidates willing to pursue their career in business administration. The new computer-based test (CBT) is conducted for admission in **IIMs** All the team members put tremendous effort and made this event a huge success. Our test center was among the **Top 10 centers of the country**.

Our College has been chosen as a **Centre for Online Entrance Test (CAT)** from 27 November to 7 December, 2009. It was a great privilege for us to be a part of this Mega Event.

The Great Mind Challenge (TGMC)

The Great Mind Challenge (TGMC), launched in 2004, is an innovative program that addresses the need of exhaustive technical education among students. It endeavors to make the students more competent and technically sound. It aims at encouraging the students to make key-contributions to develop applications on various programs. The students are immensely benefited through this training. They understood new technologies and learn new tools.

Our college has also started conducting this TGMC program to enable the students in different technical skills and projects. Students of all semesters have participated enthusiastically in this program.

IBM Center of Excellence

IBM is interested in ensuring that universities and colleges produce Technical Professionals with open standards skills who always stand against today's IT integration challenge. IBM Center of Excellence was inaugurated on 18 December 2009. This center will help in making our students to develop solutions for real-time problems. **Memorandum of Understanding** was signed by our **Hon'ble Principal Prof. (Dr.) B. M. K. Prasad** and **Mr. Himanshu Goyal, Country Manager IBM** .

It is also assured in the **MoU** that **IBM** will provide its software free of cost to all the students. Their trainers will also come to assist and train them time on different emerging technologies, softwares which are beyond our University syllabus.

Campus Placements

The Dronacharya College of Engineering is well-known for the campus placement in different MNCs. It is now becoming top college of NCR, Haryana placing 50 students in last 3 months. We all are committed to get **100% Campus Placement at DCE, Gurgaon**.

The college has invited so many companies during last three months and many students have been placed in the companies like **Hewitt, IFlex Solutions, Blue Star Technologies, 3a Mobile, Rave Technology**.
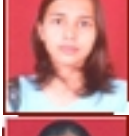
We are proud to share the list of students placed in November, 2009:

Student Name	Department	Student Name	Department
Rohit Mankotia	CSE	Abhinav Semalty	IT
Sumit Gupta	CSE	Vibhutee Kohli	IT
Anshul Goel	CSE	Ruchira Shukul	IT
Muskan Narang	CSE	Yamini Tyagi	IT
Garima Gakhar	CSE		

University Merit Holders :

The CSE & IT Department is putting in all efforts to attain the top positions in the University. We also provide extra classes for weak students. ***All Saturdays in the month of November 2009*** were working days for all the students so that they can clear their doubts, problems and also carry out the practical in labs***.*** Here is a list of ***University Merit-Holders in May, 2009*** from ***CSE & IT Department***:

Merit Holders of CSE Department

College Roll No.	Student Name	Branch/ Semester	Mark Obtained	Percentage	University Rank
9147	Muskaan Narang	CSE / VI	918/1100	83.45	XII
10015	Bhawna	CSE / IV	1006/1150	87.48	II
10024	Garima Sharma	CSE / IV	1007/1150	87.57	I
10040	Madhuri Yadav	CSE / IV	958/1150	83.30	IX
10045	Mayuri Gupta	CSE / IV	963/1150	83.74	VII
10055	Neha Ghai	CSE / IV	965/1150	83.91	VI
10103	Sarita	CSE / IV	962/1150	83.65	VIII
10111	Sonia	CSE / IV	965/1150	83.91	VI
11092	Rashmi Kalra	CSE / II	1039/1150	90.35	I

	College Roll No.	Student Name	Branch/ Semester	Mark Obtained	Percentage	University Rank
	11072	Neha Setia	CSE / II	1036/1150	90.09	II
	11064	Mohit Gupta	CSE / II	1025/1150	89.13	III
	11066	Monica	CSE / II	1023/1150	88.96	IV
	11073	Nidhi Rani	CSE / II	1015/1150	88.26	V
	11115	Sombir	CSE / II	1005/1150	87.39	VIII
	11071	Neetu Rani	CSE / II	989/1150	86	XII
	11015	Anjali Saini	CSE / II	988/1150	85.91	XIII
	11041	Harshit Rastogi	CSE / II	987/1150	85.83	XIV
	11005	Aditi Bansal	CSE / II	987/1150	85.83	XIV

Merit Holders of IT Department

	College Roll No.	Student Name	Branch/ Semester	Mark Obtained	Percentage	University Rank
	8289	Geetanjali Bholal	IT / VIII	4822/6060	79.57	XIV
	8290	Gulshan Kathuria	IT / VIII	4995/6060	82.43	VI
	9316	Sakshi Chopra	IT / VI	889/1100	80.82	XII
	9330	Vibhutee Kohli	IT / VI	892/1100	81.09	IX

	9333	Yamini Tyagi	IT / VI	886/1100	80.55	XV
	10335	Akansha Vats	IT / IV	964/1150	83.83	IV
	10363	Kumud Bhardwaj	IT / IV	944/1150	82.09	X
	10368	Nitesh Punia	IT / IV	964/1150	83.83	IV
	11379	Ritu Dahiya	IT / II	1000/1150	86.96	IX

Technology Focus :

Soft Computing

Soft Computing is a method of computing which is tolerant of imprecision, uncertainty, partial truth and approximation. Some may equate this with Artificial Intelligence. The role model of Soft Computing is the human mind. The principal constituents of Soft Computing (SC) are- Fuzzy Logic, Neural Networks, Support Vector Machines, Evolutionary Computation and Machine Learning and Probabilistic Reasoning.

"Exploit the tolerance for imprecision, uncertainty, partial truth and approximation to achieve tractability, robustness and low solution cost."

The unique property of Soft Computing is that its techniques derive their power of generalization from approximating or interpolating to produce outputs from previously unseen inputs by using outputs from previous learned inputs and generalization is usually done in a high-dimensional space.

Sakshi Chopra
VII Sem (IT)

Current applications of Soft Computing are in the fields of handwriting recognition, automotive systems and manufacturing, image processing and data compression, architecture, decision-support systems, power systems, neuro-fuzzy systems, fuzzy logic control.

Live Projects Undertaken By Students :

Disaster Management

This project is an integrated set of pluggable, web- based disaster management applications that provide solutions to large-scale humanitarian problems in the aftermath of a disaster. Our aspirations are as follows:

- Primary: Help alleviate human suffering and help save lives through the efficient use of IT during a disaster.
- Bring together a diverse set of actors from Government, Emergency Management, NGOs, INGOs, spontaneous volunteers and victims themselves in responding effectively to a disaster.
- Empower the victims, responders, volunteers enabling them to help themselves and others.
- Protect victim data and reduce the opportunity for data abuse.
- Provide a Free and Open Source solution end-to-end available to everyone.

With the above aspirations, the main applications built into the Project so far are as follows:

- **Missing Person Registry** - Helping to reduce trauma by effectively finding missing persons.
- **Organization Registry** - Coordinating and balancing the distribution of relief organizations in the affected areas and connecting relief groups allowing them to operate as one.
- **Request Management System** - Registering and Tracking all incoming requests for support and relief up to fulfillment and helping donors connect to relief requirements.

- **Camp Registry** - Tracking the location and numbers of victims in the various camps and temporary shelters setup all around the affected area.
- **Volunteers Management** - Coordinate the contact info, skills, assignments and availability of volunteers and responders.
- **Inventory Management** - Tracking the location, quantities, expiry of supplies stored for utilization in a disaster.
- **Situation Awareness** - Providing a GIS overview of the situation at hand for the benefit of the decision makers.

Team Members

VIBHUTEE KOHLI
9330

SAKSHI CHOPRA
9316

Hand Writing Recognition

Handwriting recognition is the ability of a computer to receive and interpret intelligible handwritten input from sources such as paper documents, photographs, touch-screens and other devices. The image of the written text may be sensed **"off line"** from a piece of paper by optical scanning (optical character recognition) or intelligent word recognition. Alternatively, the movements of the pen tip may be sensed **"on line"**, for example by a pen-based computer screen surface.

The feed forward Back Propagation Neural Network (BPNN) with one input layer, two hidden layers and one output layer is selected for training.

Abstract - A back-propagation neural network with one hidden layer was used to create an adaptive character recognition system. The system was trained and evaluated with printed text, as well as several different forms of handwriting provided by both male and female participants.

Experiments tested:

- The effect of set size on recognition accuracy with printed text
- The effect of handwriting style on recognition accuracy

Results showed reduced accuracy in recognizing printed text when differentiating between more than 12 characters. The handwriting style of the subjects had varying and drastic effects on recognition accuracy which illuminated some of the problems with the systems character encoding.
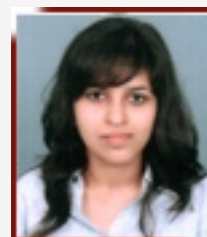
Team Members

Bhavneet
9019

Anjana M
9011

Arti Yadav
9017

Aparna Sharma
9016

Wi-fi Controlled Land Rover

In this project we have three independent systems performing three specific functions, which are then connected together to provide remote surveillance capable Land Rover. First of all, we have a remote computer with internet connection the access point for the user. The remote computer is connected to a laptop via internet, giving it unlimited range. Wi-fi connectivity of the laptop provides a medium for transmission control and data for the land rover. Now, the rover which is connected to the laptop via Wi-fi can be accessed by the remote computer. Java sockets are used to connect the two computers over the internet, a Java application is run over the VPN (Virtual Private Network) which displays images registered by the camera installed on the Land Rover and also provides a interface for controlling the land rover. After the set up of the network the remote user can access the land rover, even if no one is monitoring the laptop which provides the interface between the two. Live images from the camera mounted a top the rover will help the remote user to navigate the rover from any arbitrary distance. The rover can be navigated anywhere within the range of the wireless network.

Team Members

Amit Kumar Jain
9008

Devashish Bharadwaj
9025

Ankur Bhayana
9013

Student's Viewpoint About The Department :

Dronacharya College of Engineering is an institute where modernity in terms of assorted teaching methodology, unites with the traditional **Gurukul** system which has been the foundation of any successful institute in our country. This college is known for its quality education and discipline. Each department has its own contribution towards the success of the college the Computer Science Department in particular. The Computer Science Department has well-qualified, dedicated and experienced faculty members who always help the students in gaining clarity of the subject and imbibe knowledge. The efforts of the faculty, vigil of the H.O.D and sincerity of the students have reaped remarkable results. The Computer Science contingent has worked in an exemplary team spirit and with great zeal guiding and furnishing quality students year after year.

Manisha Sharma (Roll No. 10014)

Dronacharya College of Engineering, a real Gurukul providing disciplined environment with quality education. Computer Science Department is one of the leading departments providing highly technology-oriented programmes by the senior faculties who deliver lectures to the students on topics like Personality Development, Etiquettes, How to Face Interviews, Motivation & Confidence Building. Besides this, the college conducts Aptitude Test, Logical Reasoning test for improving the placement chances of students, Seminars by experts from experienced ones' are arranged on time to time.

Gaurav Bajaj (Roll No. 10027)