ComputerNews

Don Bosco Institute of Technology

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Gearing Up For The Semester

Greetings and welcome to Computer Science at Don Bosco Institute of Technology!

Computer science, as a field, is in a period of remarkable change and growth. Today computing is so intertwined with our world that it's hard to imagine what we would do without it.

For our under-graduates, this means great opportunities for jobs. For our faculty and researchers, it means new challenges to address the education and computing needs of our students and college.

Though small, the Department of Computer Engineering at DBIT has always maintained its impressive academic reputation by focusing on high quality research in a concentrated and strategic number of areas.

Looking ahead, I see many opportunities to continue to enhance our existing strengths and to grow into new areas. This semester, for instance, we have organized The Refractus, which was a host to Dr. Leisa Armstrong and her group of students from Edith Cowen University, Australia which proved to be a very dynamic exchange of ideas between them and the students of Computer Department.

We also continue to innovate in our curriculum. The various guest lectures organized by the department for its students stand testimony to the same.

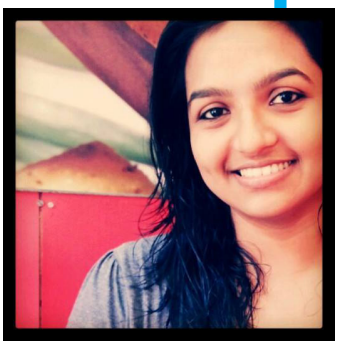
We are also putting forward, the best teaching and learning practices guided by Research Director Dr. Krishnamoorthy and Principal Dr. N.G. Joag. Fr. Adolph has always believed in our ideas and always patronized. I thank Fr. Adolph and Principal Dr. N.G. Joag for that.

This is just a taste of what is going on in the department these days. There is a lot more planned for the students in the next year.

I hope our readers enjoy reading this newsletter. Please feel free to provide us with your valuable inputs as we constantly strive to improve ourselves for the benefit of the students.
Thank you.

Sincerely,
Imran Ali Mirza,
HOD-Department of Computer Engineering.

Editor **Speaks**



Dear friends, staff, students, alumni and well-wishers, it is my pleasure to enlighten you about the activities of the Computer Department this semester through this edition of the Department newsletter.

The beginning of the year 2013-2014 has been of prominence for the Department considering the various activities undertaken, be it the annual Online Technical Festival –Teknack, to being host to Refractus- the magnanimous festival of Computer Department.

From encouraging the B.E students bring out their best technical and creative skills through their final year projects, to implementing innovative approaches in the teaching-learning plan (moodle revolution and a lot more), the department has been upgrading itself to a whole new level.

Through this newsletter, I would like to take the opportunity to express my gratitude to Principal Dr. N. G. Joag and the Research director Dr. Krishnamurthy who have been catalytic agents in injecting quality in all teaching & learning initiatives. I thank the Dean Academics, Dr. Prasanna Nambiar for keeping us focused to foster quality in all our work. I also thank the Director Fr. Adolph Furtado and the Administrator Fr. Edward Dsouza for their patronage and proactive support. Computer Department can rightly be called as the most vibrant department of DBIT because of the efforts put in by our HOD Mr. Imran Ali Mirza and also Dr. Amiya Kumar Tripathy and all the staff member of Computer Department who strive to bring out the best in each of their students.

I would appreciate suggestions and feedback from our readers so that we can put forth our best work as we constantly look for improvement to suit our reader's predilection.

Thank You.

Srinidhi Shetty
Editor/Publication Head,
B.E. Computers

Co-Editor **Speaks**

Dear friends, staff, students, alumni and well-wishers, it gives me immense pleasure to present to you this edition of Computer department's Newsletter.

This semester has been an important and fun one for the Department and was filled with numerous activities. Each semester we will update our readers on the activities of the department and its future plans for the same.

Our sincere thanks to Mr. Imran Mirza, HOD of Computer Dept, who has been the captain of our ship and has always motivated us and guided us in the right direction. I take this opportunity to thank Mr. Imran Mirza (HOD of Computer Department) for having faith in my ability to compile this newsletter.

We are also grateful to the staff of the Computer Dept. for the kind support they have extended. Our heartfelt thanks to our student bodies, which were actively involved in these activities. I also thank all the students who have contributed their articles to this newsletter.

I would appreciate constructive feedback from our readers to help us improve our scope. I hope you enjoy reading this issue.
Cheers!

Regards,
Yogesh Maurya
Co-Editor

*Departmental***News**
A half yearly newsletter of the Computer Department

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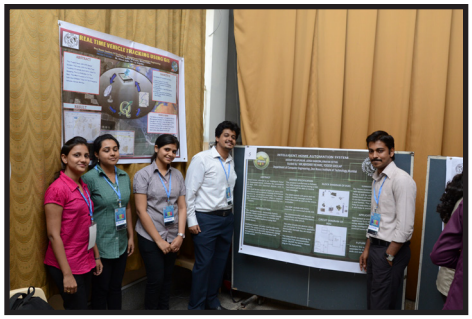
Refractus 2014

"All the forces in the world are not so powerful as an idea whose time has come."
– Victor Hugo

Yogesh Maurya (T.E. Comps)

Humankind has come a long way. Ideas are what brought us here. Ideas will lead us forward. Most revolutions we see around as began as small ideas that everyone else thought were outrageous. But they all had one thing in common, one critical factor – Someone who believed in the idea, and had the courage to see it through.

As aspiring engineers, we are all longing to get that one brilliant idea that will transform our lives, and that of others. In the common interest of sharing good ideas, and nurturing them, the department of Computer Engineering hosted Refractus – an iridescence of ideas.



Refractus was host to Dr. Leisa Armstrong, and her group of 5 students from Edith Cowen University, Australia. At 10 AM on a crisp Wednesday morning, an enthusiastic crowd gathered to witness the showcase of ideas at the Fr. Santino Mondini Hall. To set things off, Dr. Leisa Armstrong began by giving a presentation on her project – Smart Agriculture. She highlighted how the use of data collection and analysis to make efficient management decisions in agriculture, helps optimally manage resources. She showcased a Geo Portal created by her students at ECU, and also praised GeoSense, an Indo-Japanese venture that our very own Dr. Amiya Kumar Tripathy was a part of, which studied how variations in climatic conditions affected pests.

After she set the stage, our BE students took over, presenting the following final year projects:

- MediAssistEdge
- Dynamic Load Balancing in Cloud Computing
- Surge Analysis of a Pumping Water Supply main
- Automated Gardening System
- Homeopathic Diagnostic System

To judge these projects and give valuable inputs, we had Dr Satish Devane, the former principal of RAIT College, Ms. Usha Iyer, from IBM and Dr. Leisa Armstrong, ECU. The judges kept the students on their toes, by firing question at them. The audience too, seemed impressed by the ideas that the BE students have been working on, and bombarded them with questions about their projects.

After the students of DBIT were done, the ECU students told us about themselves, and what they are working on. They also spoke about their experience in India, and about the difference in the way of life, culture and people between India and Australia.

Apart from the 5 main project presentations, there were other BE projects showcased in the form of posters, along the edges of the hall.

At the end of the day, Refractus 2014 had succeeded in sending a message to everyone present. "Believe in your ideas. Believe in yourself. And finally, think big."

CLOUD COMPUTING

Madhumita Chatterjee (SE Comps)

When you listen to this topic for the first time, you'd think of it to be a really a big word! Most of the people who use cloud computing are still unaware of this term. Cloud computing is basically a wide range of services that comes under a moniker "Cloud". These services are arranged in form of stack. The average cloud user uses cloud via internet to do computing task or runs application or stores data. A person generally tends to use service like Facebook, Youtube, Gmail, Drop Box, Vimeo, Photobucket etc.

In the simplest terms, cloud computing means storing and accessing data and programs over the Internet instead of your computer's hard drive. The cloud is just a metaphor for the Internet. It goes back to the days of flowcharts and presentations that would represent the gigantic server-farm infrastructure of the Internet as nothing but a puffy, white cumulonimbus cloud, accepting connections and doling out information as it floats.

The cloud is also not about having a dedicated hardware server in residence. Storing data on a home or office network does not count as utilizing the cloud. For it to be considered "cloud computing," you need to access your data or your programs over the Internet, or at the very least, have that data synchronized with other information over the Net. In a big business, you may know all there is to know about what's on the other side of the connection; as an individual user, you may never have any idea what kind of massive data-processing is happening on the other end. The end result is the same: with an online connection, cloud computing can be done anywhere, anytime.

The Services falls under different categories of cloud computing like:
1.Software as a Service (SAAS)
2.Platform as a Service (PAAS)
3.Infrastructure as a Service (IAAS)

At the infrastructure level, all hardware resources such as computer, networking, power, and cooling are taken care of by the cloud vendor... IaaS customers are in full control over the virtual machines, storage, and everything else above in the stack. Users of PaaS services have an even greater luxury of only needing to be concerned with creating their customer applications. All of the hardware and mid-level services such as web and database servers are taken care of by the platform. Finally, SaaS applications live ubiquitously in the cloud, allowing their users access from desktops, laptops, or mobile devices.

Common Cloud Examples

The lines between local computing and cloud computing sometimes get very, very blurry. That's because the cloud is part of almost everything on our computers these days. You can easily have a local piece of software (for instance, Microsoft Office 365, one of the

versions of Office 2013) that utilizes a form of cloud computing for storage (Microsoft Skydrive in the case of Office). That said, Microsoft also offers a set of Web apps that are close versions of Word, Excel, PowerPoint, and OneNote that you can access via your Web browser without installing anything.

Some other major examples of cloud computing you're probably using:

Google Drive: This is a pure cloud computing service, with all the apps and storage found online. Drive is also available on more than just desktop computers; you can use it on tablets like the iPad or on smartphones. In fact, all of Google's services could be considered cloud computing: Gmail, Google Calendar, Google Reader, Google Voice, and so on. Upgrade to Google Apps and you can use many of the above with your own domain name attached.

Apple iCloud: Apple's cloud service is primarily used for online storage and synchronization of your mail, contacts, calendar, and more. All the data you need is available to you on your iOS, Mac OS, or Windows device. iCloud also stores media files.

Amazon Cloud Drive: Storage at the big retailer is mainly for music, preferably MP3s that you purchase from Amazon.

Hybrid services like Box, Dropbox, and SugarSync all say they work in the cloud because they store a synched version of your files online, but most also sync those files with local storage. Synchronization to allow all your devices to access the same data is a cornerstone of the cloud computing experience, even if you do access the file locally. Likewise, it's considered cloud computing if you have a community of people with separate devices that need the same data synched, be it for work collaboration projects or just to keep the family in sync.

Cloud Hardware:

Right now, the primary example of a device that is completely cloud-centric is the Samsung Chromebook Series 3, an inexpensive laptop (starting at $249) that has just enough local storage and power to let it run a Web browser, specifically Google Chrome. From there, most everything you do is online: apps, media, and storage are all in the cloud.

Advantages of cloud computing

- Can be less expensive compared to buying software and hardware
- Can be used from any computer or device with an Internet connection
- The device does not need as large of an internal storage system
- Compatible with most computers and operating systems
- Updates occur across the service

Conclusion

- Cloud Computing is a term that doesn't describe a single thing – rather it is a general term that sits over a variety of services from Infrastructure as a Service at the base, through Platform as a Service as a development tool and through to Software as a Service replacing on-premise applications.
- For organizations looking to move to Cloud Computing, it is important to understand the different aspects of Cloud Computing and to assess their own situation and decide which types of solutions are appropriate for their unique needs.
- Cloud Computing is a rapidly accelerating revolution within IT and will become the default method of IT delivery moving into the future – organizations would be advised to consider their approach towards beginning a move to the clouds sooner, rather than later.

Toppers

SEM III

Menoth Lavina - 8.93

Sequira Queeny - 8.79

Koshy Sharon - 8.75

SEM V

Pritam S. Patil - 74.70%

Singh Navnita - 73.88%

Singh Krishna - 73.76%

SEM VII

Harita Khannna - 75.87%

Richa Titto - 75.12%

Randolph Pereira - 75%

Teknack - 2014
Around The World

Srinidhi Shetty (BE Comps)

As the clock struck the midnight hour on 15th February, 2014, the journey "Around the world" began with just a click. ACM-DBIT has added yet another feather on its cap by triumphantly organizing Teknack'14, the Annual Online Inter College Technical Festival of DBIT which was attended by a plethora of zealous participants not only from Mumbai but also from different parts of the globe. The event was held on 15th and 16th February, 2014.

Teknack'14 has been contrived by global thinking, designing geniuses', creativity and inventiveness, empowering students to exhibit their latent skills and talents in the field of technical and creative innovation. The events were designed to utilize and enhance the analytical and computing skills of the students to their maximum potential. The distinctive variety in the events ensured that there is something for every participant that not only boosted their confidence their own abilities but also proved to be fun.

Teknack'14 was based on the theme of –"Around the World!" and the working plan for the same started in late September, 2013 where a lot of ideas for the events and their implementation started started being put together. Accordingly various departments like events, technical and publicity were decided and allotted and finalized. Each event for Teknack was. From mid December, 2013 the technical work of development of events started in full swing. There was a simultaneous development of posters for the events happening at the same time.

The home page was very ostentatious, where the waves in the background moved continuously and the screen moved according to the mouse position. It also had a different appearance during the day and at night. The website had different pages for the list of events and sponsors. A unique registration code was provided to the participants and they had to register themselves on the website and choose a username and password of their choice. The events included Chain Reaction, Logo Designing, Mug Shots, Acoustica, Camouflage, Virtual Stock Market, Text Adventure and Informals to name a few.

Teknack'14 received an active support and encouragement from its sponsors which included KIC education (Title Sponsor), Spykar clothing (Style Sponsor) and Buckaroo (Associative Sponsor). Teknack'14 primarily focused not only on developing logical thinking but also on social awareness such as "Cyber Safety". With the help of DBIT NSS group, Teknack'14 had a section which displayed poster portraying awareness against cyber security and bullying. The flex banners and posters of the Teknack'14 were sent to number of Engineering, Management, Diploma and Junior colleges along with few schools spread all over Mumbai. As it was an online fest, students were given the freedom to participate in Teknack'14 whilst enjoying the convenience of their homes. All the events witnessed a very large and enthusiastic participation from various colleges and schools around the city including Don Bosco Institute of Technology, St. Andrews College of Arts, Science and Commerce, Viyalankar Polytechnic, St. Dominic Savio High School to name a few.

Teknack'14 has been the most successful event till date whether it's with respect to its sponsors or the number of participants who enthusiastically took part in the event.Teknack'14 had a total of 2218 visits with 934 unique visitors. 63.7% of the visitors returned to the website showing rising enthusiasm and interest. An average participants spent 31.33 minutes on the website once logged in, showing our retention rate.

Teknack concluded triumphantly, with a promise of bringing an even bigger and better version of itself with Teknack 2015 !

Glimpse of Teknack - 2014

An Insight of Events....

The Rise of Big Data

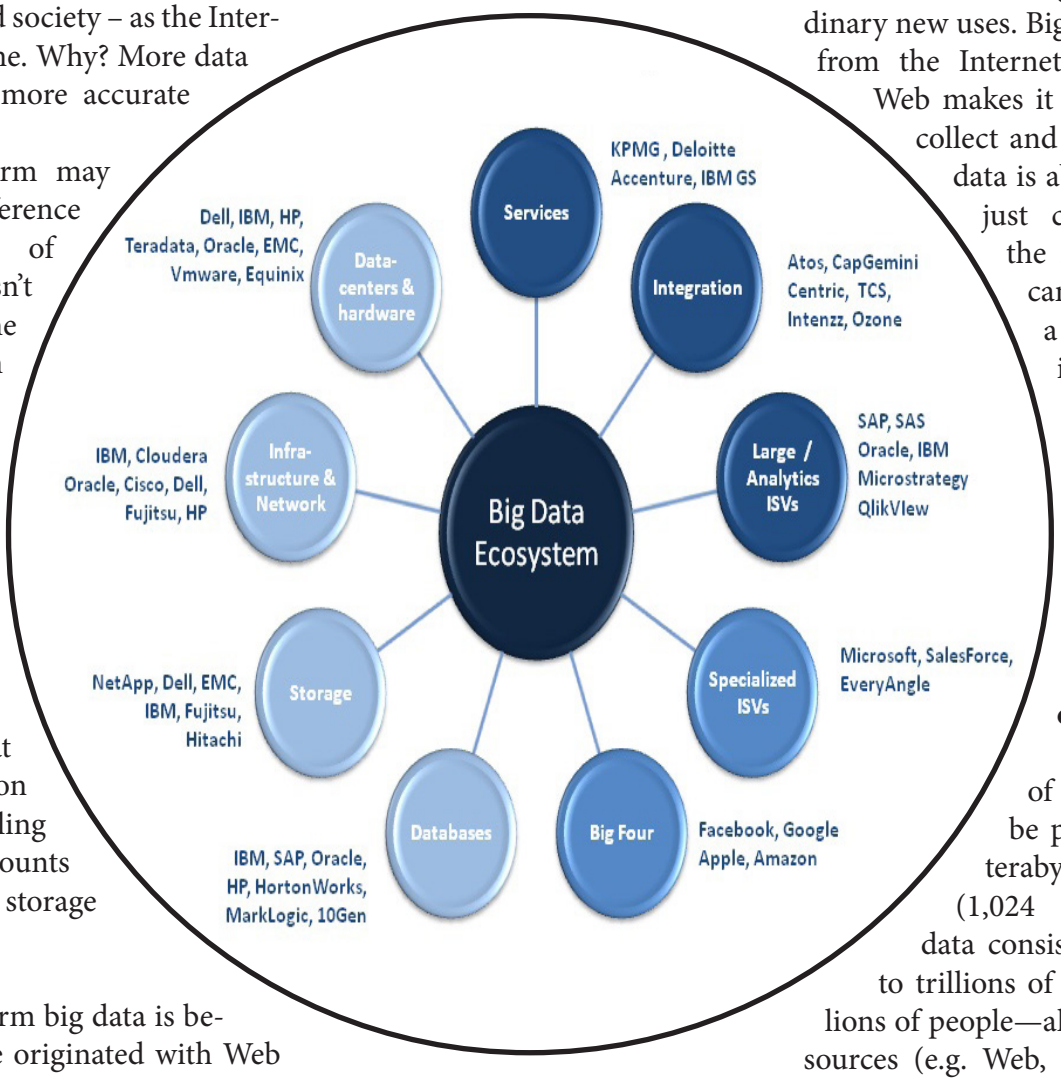
Srinidhi Shetty (BE Comps)

Big data is a buzzword, or catch-phrase, used to describe a massive volume of both structured and unstructured data that is so large that it's difficult to process using traditional database and software techniques. In most enterprise scenarios the data is too big or it moves too fast or it exceeds current processing capacity.

Big data is a popular term used to describe the exponential growth and availability of data, both structured and unstructured. And big data may be as important to business – and society – as the Internet has become. Why? More data may lead to more accurate analyses.

While the term may seem to reference the volume of data, that isn't always the case. The term big data, especially when used by vendors, may refer to the technology (which includes tools and processes) that an organization requires handling the large amounts of data and storage facilities.

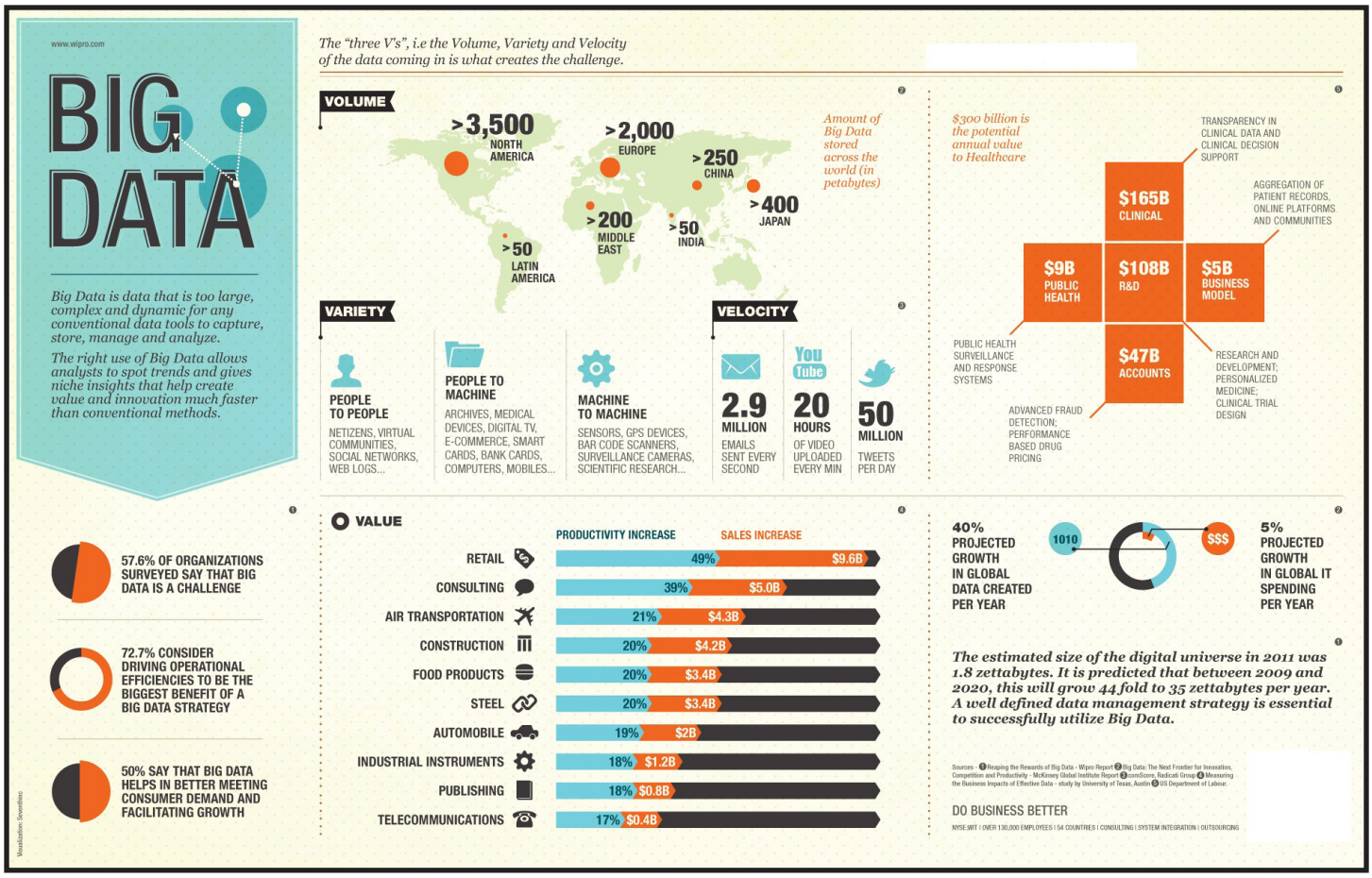
The term big data is believed to have originated with Web search companies who had to query very large distributed aggregations of loosely-structured data.



Big data starts with the fact that there is a lot more information floating around these days than ever before, and it is being put to extraordinary new uses. Big data is distinct from the Internet, although the Web makes it much easier to collect and share data. Big data is about more than just communication: the idea is that we can learn from a large body of information things that we could not comprehend when we used only smaller amounts.

An Example of Big Data

An example of big data might be petabytes (1,024 terabytes) or exabytes (1,024 petabytes) of data consisting of billions to trillions of records of millions of people—all from different sources (e.g. Web, sales, customer



contact centre, social media, mobile data and so on). The data is typically loosely structured data that is often incomplete and inaccessible.

When dealing with larger datasets, organizations face difficulties in being able to create, manipulate, and manage big data. Big data is particularly a problem in business analytics because standard tools and procedures are not designed to search and analyze massive datasets.

Why big data should matter to you

The real issue is not that you are acquiring large amounts of data. It's what you do with the data that counts. The hopeful vision is that organizations will be able to take data from any source, harness relevant data and analyze it to find answers that enable 1) cost reductions, 2) time reductions, 3) new product development and optimized offerings, and 4) smarter business decision making. For instance, by combining big data and high-powered analytics, it is possible to:

- Determine root causes of failures, issues and defects in near-real time, potentially saving billions of dollars annually.
- Optimize routes for many thousands of package delivery vehicles while they are on the road.
- Analyze millions of SKUs to determine prices that maximize profit and clear inventory.
- Generate retail coupons at the point of sale based on the customer's current and past purchases.
- Send tailored recommendations to mobile devices while customers are in the right area to take advantage of offers.
- Recalculate entire risk portfolios in minutes.
- Quickly identify customers who matter the most.
- Use click stream analysis and data mining to detect fraudulent behaviour.

Conclusion

Big data is a resource and a tool. It is meant to inform, rather than explain. It points towards understanding, but it can still lead to misunderstanding, depending on how well it is wielded. And however dazzling the power of big data appears, its seductive glimmer must never blind us to its inherent imperfections. Rather, we must adopt this technology with an appreciation not just of its power but also of its limitations.

From Beyond the B.E.

"I will never hide my talents, if I am silent, I am forgotten. If I do not advance, I will fall back."

Hi, I'm Regvina, Computer Engineering - 2013 Batch. I'm currently pursuing Master's in Computer Science at New York University (NYU). Life at DBIT always prepared me to take up challenges. The last minute/overnight studies before MU exams (which felt more like a battle), the struggle to finish assignments before the deadline, projects, mini projects & then the extra-curricular activities! My experience as a student at DBIT definitely taught me the knack of Multitasking!

The Engineering course at Don Bosco Institute of Technology has given me a strong foundation and has moulded me into a better professional. Computer Engineering Department has constantly proved itself as the best at DBIT, so if you are HERE, make the best of it! The certification courses like Oracle, SCJP, IBM's RAD, Lotus Domino, DB2, Adobe Flex or the spoken tutorial courses conducted in collaboration with IIT, Bombay helps you immensely & gives you a cutting edge over the other students.

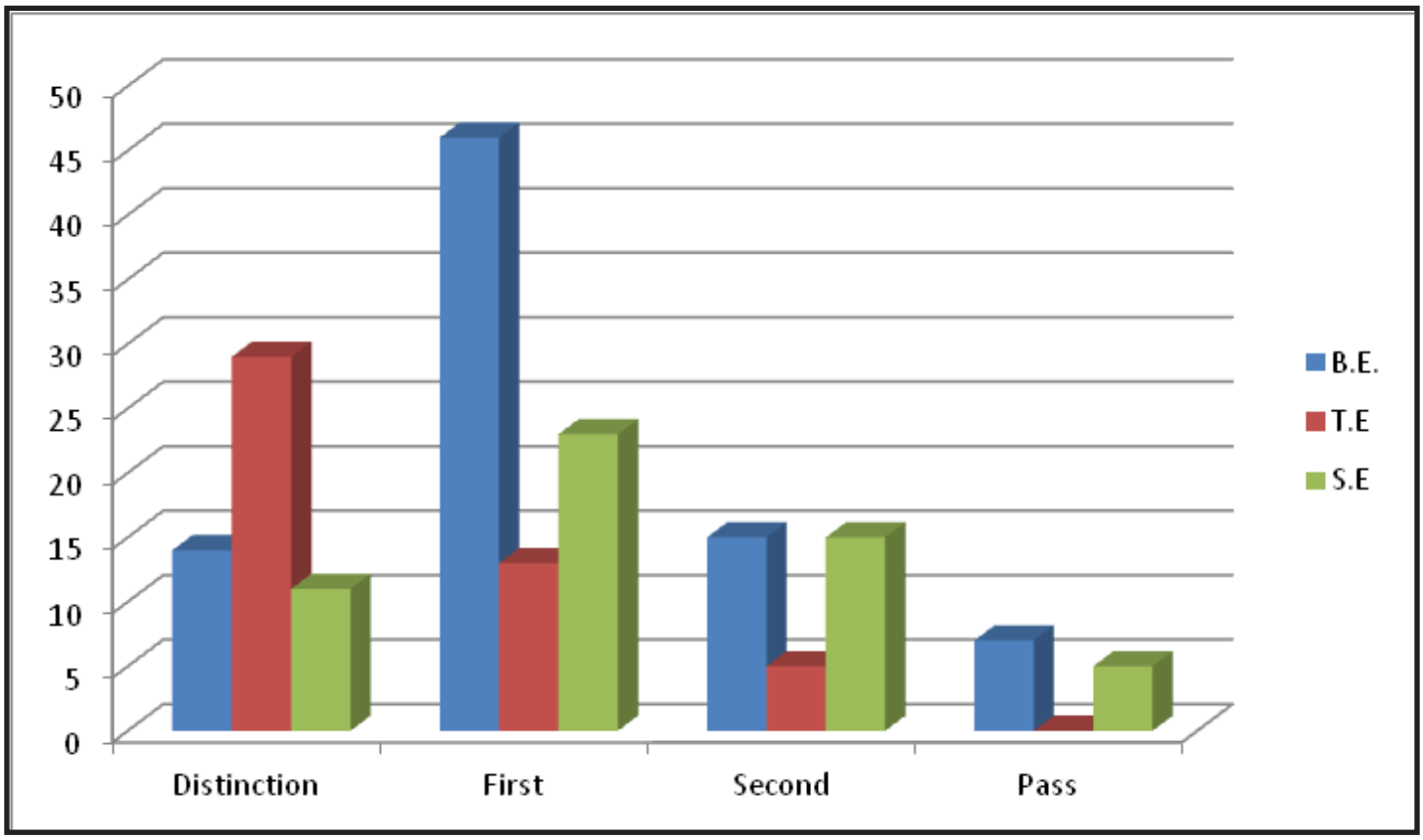
From taking up challenging responsibilities like Editor/ Publication head for Computer Department and ACM, to learning new technologies & organizing events for Teknack , the experience gained in 4 years has played an evident role in getting me an on-campus job at Marketing & Communications Department, NYU. My employer, on noticing my graduation picture on my work desk, stared at the Grad hat & said "So you're Don Boscite?" & I proudly said "Yes". Proud to be one, indeed!

For all those struggling with low aggregates, having a tough time with placements, 'Never give up on your dreams, you never know how close you are'. To all the fellow aspirants planning for higher studies abroad, "Gear up! Prepare yourself each day." 'BE'ing is just a mere trailer, Masters is a war! Take each day as a challenge and most importantly, don't give up on learning. For those who wish to explore the professional/entrepreneurial world beyond studies -Creative, Innovative, Effective - the 3 key words to excel. Have ideas? It's never too late to implement them! Explore all the resources you get as a student at DBIT. Want to take up responsibilities? Stay informed, attend workshops, learn technologies, conduct workshops, work on projects beyond your curriculum, approach the HOD & other faculty members who promote extra curricular activities & most importantly make the best of the 4 years that you spend here. It's indeed the best inspirational place to be at, especially for a person who wishes to explore his/her talent & start on a new venture.

Not to forget, Fr. Bosco, the hero & inspiration of DBIT. We, as students were lucky to have him as our mentor, a person who's smile & words were enough to cast away all our worries. You are truly missed, Father.

Feel free to approach me, if you have doubts/questions regarding higher studies, masters, what after BE, jobs.
Happy 'BE'ing. Cheers!
Regards,
Regvina Oliver.

Result Statistics



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