



DEPARTMENT OF COMPUTER ENGINEERING

COMPUTER NEWS

Volume 1 Issue 2 July 2018

Message from the Editor

Dear Reader, With immense pleasure, on behalf of the entire newsletter team, I present the Computer Department newsletter. I am happy that there is a dedicated team of staff and students who have brought out this newsletter enlightening us about the stupendous achievements and activities of department DBITians in the fields of academics, research, extra-curricular activities, in a nice way. The beginning of the even semester of academic year 2017-18 has been of prominence for the department considering the various activities undertaken, be it the annual online ACM's technical gaming fest 'Teknack' with the theme 'Around the World' or various workshops. It is happiness unlimited to see the BE students breaking barriers and moving forward confidently as clearly seen through their placement statistics with the adage "Fortune favours the bold" is very true in their case. There is nothing, absolutely nothing that stops the department juggernaut from rolling forward, going on boldly from one level of technical and creative skills to another level. This is true with BE projects showcased in 'INNOVEX'.

Through this newsletter, I would like to take the opportunity to express my gratitude to Principal Dr. Prasanna Nambiar who have been a catalytic agent in injecting quality in all teaching and learning initiative. I also thank the Director Fr. Colbert da Silva and administrator Fr. Leon Cruz for their patronage and proactive support. All these things have been made possible by the extraordinary vision and the immaculate planning of our HOD, Ms. Nilakshi Joshi. The department can be rightly called the most vibrant department of DBIT because of the efforts put in by Dean Admin, Mr. Imran Ali Mirza and Dean R & D, Dr. Amiya Kumar Tripathy along with all staff members of the Department who strive hard 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.



-Ms. Sejal Chopra.

“For all the future IBMs“



A Guest Lecture on the topic of Machine Learning was held on the 29th of January. The lecturer was Mr. Laurence Albert the managing director of LA Bootcamps Pvt. Ltd. a company that provides global learning solutions in sub fields of computers namely Artificial Intelligence, Machine Learning, Cyber Security, Cloud Security, Data Science and Robotics. The field of machine learning is one that has risen back to relevance post the AI winter and in a day and age where automation and computing power is rising at a rapid rate, knowledge in this field makes

to the companies seeking out for ML engineers. Full attendance by the entire class of BE comps, who were the target audience showed their willingness to learn.



“A Computer Engineer that can't build a PC is like French cuisine without cheese!”

A PC Assembly Workshop was organized on the 2nd of February for the second year students. The purpose of this workshop was to inform the students of the incredible innards of a PC, to show them that a melange of

components built on substrates of silicon and metal can give rise to an entire STEM field. For the workshop the students were arranged in groups of 6 and led through an informative disassembling and reassembling informative experience for the students of a PC with a guided tour of its innards 'cause as the French say (and I am paraphrasing here) 'a Computer Engineer that can't build a PC is like French cuisine without cheese!' By the end of this workshop the students were able to disassemble and reassemble a PC and name the components and their functions; an overall fun and highly



Semicode -A coding competition was organized in collaboration with ACM NMIMS and ACM SNDT for the students on the 8th of February 2018. The event started with an explanation of the rules to the students and was held for a total of 2 hours on Codechef which is a competitive programming website. The competition successfully ceased with the selection of 5 teams out of 42 comprising of 84 students in total. The next and the final round of the Semicode competition was conducted in NMIMS.



ACM's very own game fest: Teknack 2018.



Held online on the 24th and 25th of February, 2018 was ACM's technical gaming fest 'Teknack' with the theme 'Around the World'. A massive success as far a college's on-line technical events go; Teknack saw attendance from nearly 600 visitors in the age group of 16-25, from more than 20 colleges spanning over 10 states. Teknack also saw participation from international students from as far away as USA. The fest provided an opportunity for the up and coming programmers and designers of DBIT to put their best foot forward on a larger platform.

There were several online activities that were conducted during this fest with imaginative names such as Snowball Rush with over seven hundred hits, Swift Ninja which saw over a thousand hits, and several others with a total of above nineteen thousand hits. The visitors on average spent around 19 minutes per session. With each user attending more than two sessions on an average a total of around 1350 sessions recorded. The event wouldn't have been possible without painstaking hours spent by the stupendous students of DBIT's department of Computer Engineering and support from our sponsors, well known brands such as Starbucks, CASIO, lenskart.com, frapp, Pizza Hut, Jamboree among several others.

Because nothing accelerates development like competition....
-Competition led man to the Moon and competition catapults the credible and competent to the top.



An Agile and Scrum Workshop organized on the 9th of March for the third year students of the Department brought in Mrs. Pradnya Gonthal a Scrum Coach at bookmyshow.com, a company that makes ticket booking highly accessible. The event commenced with an interactive activity to get the students involved and invested in the workshop. Then it moved on to introduce the agile methodology and the scrum framework. The students were divided into 4 Scrum teams each with an elected Scrum Master and a Product Owner. A problem statement of requirements was divided into various sprints and handed over to the respective product owners by the trainer Mrs. Pradnya.



A common theme of product was shared and the first sprint of development was run. After the execution of the sprint, the sprint retrospective was discussed, wherein the Product Owners and Scrum Masters did an analysis of their teams performance. The sprint was followed by another discussion on Scrum framework at length and in detail. An interactive fun quiz on the Scrum framework was also conducted. After which we had the execution of the second sprint where the earlier module was updated and further improved and developed.

A quick retrospection followed the second sprint after which integration of all the independent modules into a single project took place. The final sprint successfully completed and demonstrated to Mrs. Nilakshi Joshi who gave her reviews as a stakeholder. All in all it was a highly informative and interactive session that lasted from ten in the morning to five in the evening.



An introduction to Micro-controllers

An Arduino Workshop was organized on the 16th of March by the third year students of the department for the second year students which introduced Arduino to the SE students. Arduino which is a company that produces open source micro-controllers, the boards they make may also be referred to as Arduinos, these micro controllers are highly versatile and can be used to make a plethora of interesting projects hence a knowledge that pertains to Arduino can extend to various other computer related hardware. The main aim of this project was to give the students a head-start with respect to their Computer Organization and Architecture projects. In this workshop the students learned how to program an Arduino board to do various things such as blinking LEDs in a pattern or playing a tone from a buzzer.



The students were divided into groups and each group was given an Arduino board and other components, this led to a hands on experience with the boards and leading to quicker and long lasting knowledge acquisition.



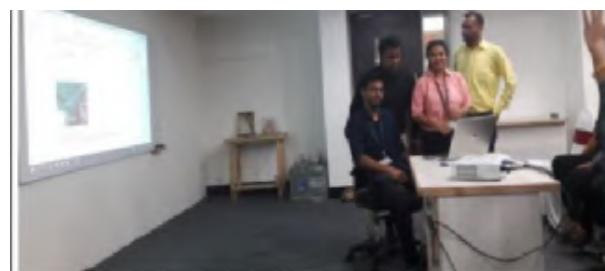
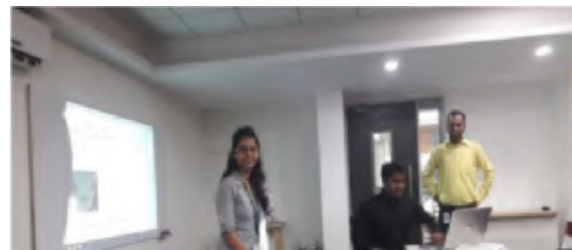
A Perl workshop was conducted for S.E. Computer Students on 23rd March 2018 by Mr. Achilles Rasquinha – Software Developers at ERPnext.

SEMINARS

“Internet of Things”

A guest lecture by the venerable and veracious Mr. Chirag Tank who worked in the field for two and a half years and then started freelancing was organized on 21st March 2018 on the topic of IOT. IOT is another topic that is highly relevant in the shifting seas of silicon. IOTs refer to all the physical devices ‘smart’ that make up a network, these smart devices include everything from home appliances to vehicles to smart floor mats (which is an actual thing in the present day). These devices consist of several components that produce a lot of data from various readings and calculations which is then used to

give the user important information on the things the devices tend to. The lecturer an expert in the topic introduced it to the students along with its scope in our modern lives. The lecturer also shared ideas such as the concept of connecting cars a project which is currently in progress in Germany. A case study pertaining to the topic was also discussed. The students left the session smarter and more informed on the topic of IOTs, which is why workshops such as these are highly important; these topics aren’t covered in the curriculum but are fertile fields in the world.



Innovex 2018

Final year Project Exhibition ‘Innovex 2018’ presented by the B.E. undergraduate students from all the four departments of Don Bosco Institute of Technology, Mumbai was a great success indeed! This exhibition was organized for the students to showcase their year long effort and help in encouraging open-ended discussions and deliberations for improving the scope of the project and also encourage the students to pitch their ideas & solutions in front of distinguished guests from the Industry, academia and alumni.

Winners of Innovex 2018

Rank 1:

Project Guide: Dr. Amiya Kumar Tripathy	
Faisal Khan	Bosco A.I
Royston Lobo	
Swapnil Naik	

Rank 2:

Project Guide: Ms. Sana S, Ms. Nilakshi J.	
Jovita Mathias	Traffic Analysis and Road Accident Prediction using QGIS
Shubadha Medhe	
Raghasri Raghavan	

Rank 3: (TIE) - Group 1

Project Guide: Ms. Dipti J.	
Khushboo M.	IOT for Resource-Constraints and Emergent users using Physical Web
Pratiksha K.	
Pooja U.	

Rank 3: (TIE) - Group 2

Project Guide: Ms. Deepali K.	
Vivek Dsouza	An Immersive Interior designing solution based on the principles of Mixed Reality.
Dayton Xavier	
Dean Joyson	

Achievements

Winners of National Level Smart City Smart Idea Contest

First prize of Rs.20,000 was bagged by Ms. Bianca Alphonso, Ms. Sarita Saldhanha and Mr. Sisil Sunny. Their Project was called 'JUST-TAP' : A BUS TICKETING SYSTEM USING NFC guided by Ms. Deepali Kayande.

Mr. Linson Miranda, Mr. Preetham Monis and Ms. Ashdeep Kaur Vij bagged the Third prize of Rs.5000. Their Project was on Water management using GIS guided by Dr. Amiyakumar Tripathy.

Three Cheers for the Final Years!!!

A hearty congratulations to all the final year students of the Computer Department and the teachers responsible, for the entire batch passing out sans any KTs, 100% results obtained by the 2017-2018 batch, an absolutely marvellous achievement. Of seventy students none obtained marks below 40% and over 30 students obtained marks above 70%, outstandingly distinctive!



Faculty Achievements

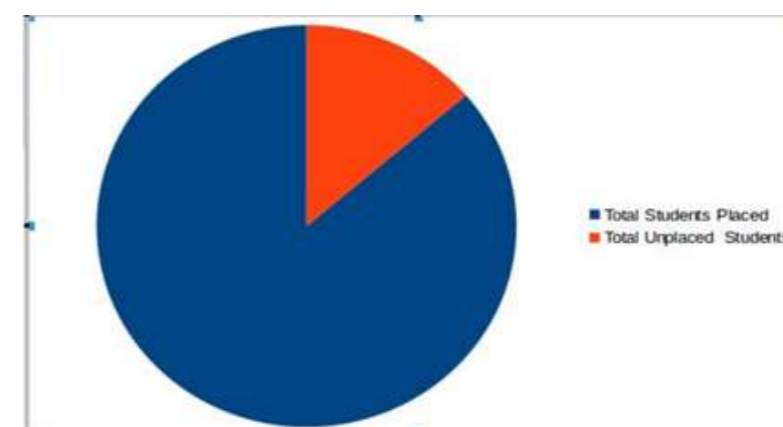
Sr. No	Achievement Areas	Particulars
1	Minor Research Grant from University of Mumbai	Following faculty have received Minor Research Grants from University of Mumbai for the academic year 2017-18 Dr. Amiya Kumar Tripathy (Rs. 45000) Ms. Ditty Varghese (Rs. 40000) Ms. Kadambari Deherkar (Rs. 39000) Ms. Dipti Jadhav (Rs. 30000) Ms. Priya Kaul (Rs. 25000)
2	Researcher Fellowship from RM University of Technology, Taiwan-Ok, Bangkok, Thailand.	Dr. Amiya Kumar Tripathy received visiting Researcher Fellowship from RM University of Technology, Taiwan-Ok, Bangkok, Thailand, 1st January 2017 to 31st December 2017.
3	Book Chapter publication in Springer edition	Dr. Amiya Kumar Tripathy, Ms. Nilakshi Joshi, Ms. Kalpita Wagaskar and Ms. Sana Shaikh published a paper which appeared as a book chapter in Springer edition.
4	Research with premier institutes	Dr. Amiya Kumar Tripathy, Ms. Nilakshi Joshi and Ms. Sana Shaikh completed collaborative project work with students with Dr. Jitendra Shah and Dr. Sumit Sen alongside B.E Computer students.
5	Invited talk in IEEE-GRSS event held in collaboration with IIT, Mumbai	Ms. Nilakshi Joshi, Ms. Sana Shaikh, Ms. Ditty Varghese and Ms. Shafaque Sayyed delivered an invited talk in IEEE-GRSS event held in collaboration with IIT, Mumbai.
6	Curriculum development for RUSA	Dr. Amiya Kumar Tripathy, Ms. Nilakshi Joshi, Ms. Sana Shaikh, Ms. Ditty Varghese and Ms. Shafaque Sayyed were actively involved in syllabus setting for RUSA
7	Nomination for result evaluation committee for Mumbai University	Ms. Nilakshi Joshi is nominated on the result evaluation committee for Mumbai University by Vice Chancellor of Mumbai for the academic year 2017-18 and 2018-19.

Faculty Achievements

Sr. No	Achievement Areas	Particulars
8	Nomination for syllabus revision and setting committee for Mumbai University	Faculty members from the department are nominated for the syllabus revision committee by University of Mumbai.
9	Organization of syllabus orientation for DWM and BDA course on behalf of Mumbai University.	Dr. Amiya Kumar Tripathy, Ms. Sana Shaikh and Ms. Priya Kaul organized the syllabus orientation for Dataware Housing and Mining for B.E Computer Engineering on behalf of Mumbai University.
10	Research paper publication	20 papers have been published by the department faculty in reputed conferences and journals.
11	Organization of IEEE-GRSS event	Dr. Amiya Kumar Tripathy, Ms. Nilakshi Joshi, Ms. Sana Shaikh, Ms. Ditty Varghese and Ms. Shafaque Sayyed coordinated IEEE-GRSS event at DBIT in collaboration with IIT, Mumbai and IEEE Mumbai.
12	ISO Internal Auditor's Team, DBIT	Ms. Nilakshi Joshi and Ms. Kadambari Deherkar worked in ISO internal Auditor's team to conduct an internal audit for DBIT.
13	Curriculum development for RUSA	Ms. Priya Kaul has undergone training as a certified first aider with support from the institute.
14	STPP	The whole faculty of Computer Department has successfully completed STTP organized by the BSH and IT department of DBIT in association with ISTE.

Placements 2017-18

Total Students	Registered for Placements	Eligible Students	Eligible Placed	Non Eligible Students	Non Eligible Placed	Percentage of Eligible Students Placed %	Unplaced Eligible Students
70	51	48	42	03	02	88%	07



- Company Names:
- Reliance Retail
 - LTI
 - Hansa Cequity
 - Angel Broking
 - HSBC Tech
 - Information Asset
 - UGAM Solution
 - Cybage Software
 - Jacobs
 - QSpider
 - TATA Communications
 - Indus Geek
 - Majesco
 - Amazon AWS
 - NSEIT
 - ZYCUS
 - GEP
 - Adrosonic
 - Pharmeasy
 - Accumen Security

Alumni Guest Session

It is always good to see returning faces and so 10th of April saw a visit from Mr. Reyner D'Souza, an alumni of Don Bosco Institute of Technology to conduct a guest lecture for the third year students of the computer department. Mr. D'Souza who currently works as a Data Analytics manager at Scotiabank in Toronto, Canada spoke of his journey to his current job, one that is coveted by on their way to becoming successful computer engineers. Seeing one of our own working a dream job for many was certainly an inspiring occasion.

Reyner bestowed upon the students insightful information regarding several topics such as the prospects of studying in Canada, obtaining a residency permit, the importance of having a LinkedIn account, among several other things which the students imbibed with delightful glee. At the end of the session, Reyner alumnus of DBI answered questions put forth by the inquisitive students, most of which pertained to applying to Canadian universities which shows the forward thinking of the students, wanting to apply for post grad studies in a foreign land fertile with opportunities; all in all the session was an inspiring, intriguing and interactive one.

ALUMNI Q&A

Ms.Ditty Varghese is not only an alumni of DBIT(a 2011 pass out) but is also currently a teacher at DBIT.



How has your educational experience measured up to your expectations?

A. The education pattern of Mumbai University is such that most of the students only end up preparing for qualifying the exams and there is hardly any thought process beyond that.

How do you find the facilities such as laboratory, IT access, information resources and project work?

A. Facilities provided by DBIT were quite good for the kind of work that was carried out through the course. I remember there were a set of students who used to wait back and use the laboratory till 8pm or so for technical chapter related work.

What do you see as the key attributes an employer would be looking for in a graduate engineer?

A. We are living in a fast changing world. As per me, an employer would look for adaptability and curiosity to learn in a graduate engineer.

What improvements would you make if you had a magic wand?

A. If I had a magic wand I would definitely try to change the approach of students towards Engineering and bring in a heuristic value added approach to the System as a whole.

What extent does the program provide for your personal and professional capabilities development? Are there measures of your personal development and performance such as team work, leadership, management, communication and presentation skills addressed in subjects studied?

A. Of course! We had courses like Communication skills and it does help you a lot in the long run. We used to cry and crib about these presentations but now we do realize how important and helpful these courses were.

“Agli baar Big-Data ki Sarkaar?”

The 2019 Indian Lok Sabha elections are coming up and the BJP led NDA might get another term or the Mahagathbandhan may form the government or we might follow our neighbours Pakistan and select a cricketer as our leader (if Kohli can win in Australia he can definitely be PM). No matter what the case is, each of them has to run a political campaign in a nation of 1.32 billion people and 283 million cows. This is a huge task and politicians are using the large number of voters to their advantage with Big Data. Every second person in India is an internet user, double of what it was in 2014, and hence we as a population leave a massive digital footprint which can be analysed to get valuable data points and politicians are milking it to the fullest.

The data for such analysis is obtained from two sources, one being the official source, i.e. the census and the other from third party organizations, which collect individual data which people have willingly made public. The data obtained from the government is available to everyone and is already categorised to a great degree. Information such as age, religion, caste, gender, income, marital status, wealth, level of education, health condition, family size, family income and various other socio-economic factors are maintained in the census. With this large data set, various principles and methods such as clustering are used to perform data analysis and a rough estimate can be made on the individual voting tendency. To make this estimate more accurate it is combined with data from third-party organisations. This data is obtained from social media profiles and from some applications/services to which we willingly give access. The additional data is used for determining the specific issues which an individual cares about and makes a prediction model. Monte Carlo and Markov Chain Monte Carlo methods are used to evaluate such Bayesian models of voting predictions.

Politicians use Big data to decide their national/general political manifesto, which appeals to a larger voter base and is able to bring them into power. They then decide the key issues which they are going to emphasise on in the media for the election campaign and also determine the issues which show the opposing party in a negative light and highlight them to the public. Previously politicians used to localize their campaigns and make slight alterations to their speeches according to the location and crowd at their rallies. Now, with the help of analytics, they can predict the issues which matter to individuals the most and display personalized advertisements in news feed or online ad spaces. This is true for both positive advertisements about the party and negative ads of the opposition. They also target non-voters and new voters and try to woo them.

The Indian National Congress has an in-house analytical branch for such data analysis while the BJP used the services of Prashant Kishor's Indian Political Action Committee (I-PAC) in 2014.

Many political strategists and commentators have attributed a major reason for the BJP victory to the expertise provided by I-PAC. There are many firms which offer their insights to politicians on campaigns right from local Municipal elections to Lok Sabha elections.

“Agli baar Big-Data ki Sarkaar?”

Barack Obama, Mitt Romney, Donald Trump, Brexit-Leave campaign have all used Big Data in their campaigns in various capacities. The Brexit- Leave Campaign and Trump’s 2016 election campaign used the services of the controversial Cambridge Analytica. Cambridge Analytica are currently under investigation for procuring data illegally from Facebook users under false pretence and using it for analysis. The firm also dabbled in Indian politics data is but used shady techniques to obtain data. Big data is also used by elected officials to plan schemes which will be beneficial to the people, cheaper for the government to implement and has substantial impact, Swaniti Initiative is one such firm which helps the government in doing so. Apart from political parties, news stations also use this technology to a certain degree to predict results long before the exit polls. So, maybe your statistical aptitude or your smart algorithm will help the next Prime Minister to form the government.



**-Written by:
Mr. Taaha Kaazi**

OUR PATRONS



Fr. Colbert Da Silva
Director



Fr. Cyril De Souza
Campus Minister



Fr. Mario Vaz
Exec. Director -DBMR



Fr. Roy Noronha
Administrator



Fr. Joe Braganza
Exec. Director - DBMM&C



Dr. Prasanna Nambiar
Exec. Director -DBMR



Dr. S. Krishnamoorthy
Advisor - DBIT

A bijou note from the Co-Editor

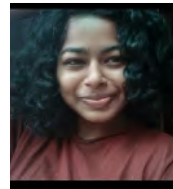
Dear Readers,

I hope you relished this edition of our Newsletter. I would like to take this opportunity to thank everyone who has immensely contributed towards this edition to make it successful. It gives me colossal pleasure in introducing the...

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