



CODE BYTES

DEPARTMENT OF BCA
DHSK COLLEGE, DIBRUGARH

VOL II



From the Principal's Desk

Dr. S.K Saikia
Principal
D.H.S.K College, Dibrugarh



Editorial

In the next 10–15 years, scientific and technological progress will change the industrial structure and global economic growth, and will profoundly change people's lives, according to an article "Visions and Scenarios of People and Science and Technology Development to 2030," published on Bulletin of Chinese Academy of Sciences. Technology is changing our lives in a lot of ways. It has the power to make our lives better and easier, or it can also affect us in a negative way. There are predictions that technology will change how we live in the next 20 years. The application of new technologies has changed the concept and ways of human life. People's increasingly high requirements for healthy and comfortable quality of life have led to the upgradation of products and services. The article further said that the synchronization between physical human and virtual human will be challenging, and virtual human with strong learning ability, will challenge physical human in technology, safety, ethics, growth, and learning. Human will coexist with machines to create a convenient and comfortable living environment.

Technology is constantly changing and evolving. It is no longer a single entity but a collection of many continually changing and evolving technologies. In the past, robots were almost exclusively used in heavy industrial applications, where they were kept far away from humans for safety purposes. Today, however, robots are beginning to work alongside humans. By 2030 we can expect robots to take a much larger role in daily life. We might have robots that help us with everyday cooking, cleaning, and even driving cars. Neeta Ambani buying a robot named 'Sex Male Doll' is in news these days. The cost of this robot is being told in billions and it's been said that this robot of Nita Ambani looks after all the household chores.

Experts believe that at least 10% of the world's population will have some clothing that comes with a chip within that period. American clothing brand Tommy Hilfiger has developed a new line of clothing embedded with smart Bluetooth chips that link to a mobile app and game from the brand and allow wearers to earn rewards points as they move among various locations. After wearing the cloth, it will get connected to an app, and the app will encourage the person to run, play and do their activities to earn reward points.

Even Moving a step forward from microchips, now nano robots, though currently in R & D phase, these are expected to bring revolutionary change in the way technology is being used; for example may be in the field of nano medicines one potential use of these nano robots may be to find and destroy the cancer cells in the human body.

I wish best wishes to the department of BCA for bringing out this newsletter.

"Our passions are the true phoenixes; when the old one is burnt out, a new one rises from its ashes".

Being on the Editorial Board of the Departmental Newsletter has truly been an unparalleled honour and I am filled with gratitude for this opportunity. As this academic year comes to a close I lay down my pen with eternal thanks. After the years that we have lost to the pandemic, we have now finally risen from what was and are now back on our toes better than before. The severity and impact of the COVID-19 Pandemic have had a profound impact not only on our lives, lifestyles, and cognitive processes, but also on industry and academics. The silver lining, though, is how our department have reacted and responded to these unusual circumstances with brilliance which is the theme of this year's Code Byte. "Code byte" is more than a publication. For us, it is a visual depiction of all of our hard work, as well as a representation of the wonderful memories and experiences of the past year.

'Code byte' is a chance for students to come out of their shells and discuss their thoughts on technology without sacrificing any of their academic time. A note of gratitude for all my seniors, fellow staff and students for sourcing in the required resources and helping me in editing this second volume of the departmental newsletter.

We hope that our efforts are recognised and valued by all, and we pledge to continue providing content that each of you will enjoy reading.

Mrs. Pinalkshi Komwar
Editor

From the Desk Of Vice Principal

Dr. Priya Dev Goswami
Associate Professor
Department of Mathematics



In the present world the computers are used in every field of human activities. It will be very difficult to imagine a world without computers. Now it is an indispensable part of our life. All government activities, financial transactions, business activities, research activities etc are done using this wonderful machine. Nowadays it is very difficult to find out where it is not used. Two decades ago this type of activities were unimaginable. Use of computers made our life very much comfortable and easy. As the computation speed increased in an unimaginable magnitude, so service is delivered with high precision. In spite of this tremendous impact on society, many things yet to be discovered in computer science. For example AI is used in many fields successfully, but still it has to go many miles to attain the level of intelligence as that of human being. More over quantum computing technology yet to be developed fully. This technology will bring a sea change to the computer industry and thereby the uses also. This year the Nobel Prize in physics, 2022 is awarded to Alain, John F. Clauser and Anton Zeilinger for their pioneering work on quantum information science. This shows that lots of theoretical and technological inventions are awaiting in future.

Realizing the importance of the immersing subject, computer science, our college introduced Computer Science as a core subject in the year 2009 and the professional course, Bachelor of Computer Application in the year 2010 under Dibrugarh university. Since then we are never in a back foot. Youth of this region getting the opportunity to pursue the courses. Department of BCA is doing very well. Department is giving all kinds facilities and exposure to the students the regarding the unimaginable opportunities in the field of Computer Science. Department introduced a tradition of publishing a news letter covering all aspects of their activities. It is a best practice of keeping records of the department. I congratulate all the members involved in bringing out of the second volume of the news letter.

Thank you

From the Desk of President, Governing Body DHSK College

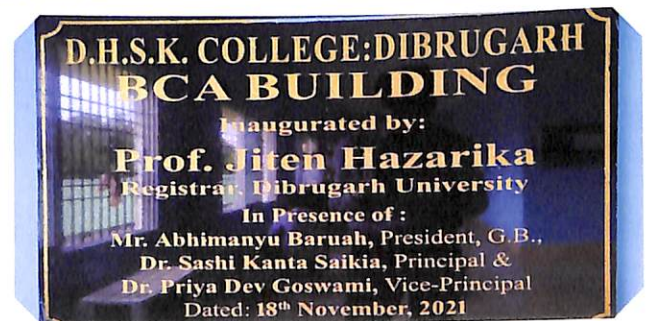
Mr. Abhimanyu Boruah



It is my great pleasure and proud moment to know that the BCA department of DHSK has come up with the second issue of its department's bulletin "BCA News Letter". The bulletin always provides a platform to showcase the talents and achievements of the department. It is an eloquent expression of the progress and outstanding achievements that the department has to its credit and particularly the all round personality of the students. Hence I strongly believe that the bulletin will serve as a window through which the complete profile of the academic and co-curricular activities, achievements and progress made during the stipulated period can be viewed.

I always believe that this BCA department is committed to creating an ambience for nurturing innovation, creativity and excellence in our students. I heartily congratulate all the members of the department to bring out this magazine adding a glorifying and colorful petal to a wonderful flower and at the same time I convey my good wishes for the success and bright future of the bulletin as well as the department.

Thank you



Departmental Information

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3. Harjindar Singh :- 7002345114
4. Pinakshi Konwar :- 9101569652

From the Desk Of HoD, Department of BCA



Mr. Harjinder Singh

Visit to BCPL on
13th Sept, 2020



Sanjukta Handique
BCA 5th Semester
D.H.S.K College, Dibrugarh

Information technology has made a drastic change in the field of education system of organization. To be involved in this field education Qualification is a must. The courses like BCA, MCA, M-Tech in computer science play a vital role in fulfilling the requirements to enter the field of information technology.

Myself Mr. Harjinder Singh from Dibrugarh presently working in my profession as Head of the Department Computer Science and BCA is conveying a message that to be successful in life always try to be active and think to learn things which are new to you. D.H.S.K college has provided a great and useful resource in order to fulfill the requirements which are necessary. Our Department has well developed classrooms, containing Aircondition, projectors, internet facility. So thanks to our principal sir.

Dr. Sashi Kanta Saikia for providing such a well developed facility to encourage the knowledge and skills of our students. At last I want to say that always try to use the resources available nearby in our environment and also remember one thing.

“Develop your skills
Develop your knowledge,
To develop yourself”.

Thank you

On 13 September 2020, 27 numbers of students of 5th semester, department of BCA along with Vice Principal Dr. Priya Dev Goswami sir, Head of the BCA department Harjinder Singh sir and our teacher Pinakshi Konwar ma'am went on a trip to visit Brahma Putra cracker and polymers limited (BCPL). We arrived there at 10:00 am. The trip was intended for us to have an idea about IT sector and its technologies that are being used by the big industries. Moreover, the visit was a great way to sharpen our skills of listening, questioning, and interacting with the professionals. Here I also want to say proudly that the present Managing Director is an Assamese person Mr. Rib Hazarika.

After we gathered in front of our college waiting for the bus, we soon departed with all the students and our teachers. Once we all had our entrance pass, we formed a line with our pairs, the military personnel was checking everyone's passes and letting them through the gate. Our first destination was the Office of the Managing Director. Soon our host along with the important personnel of BCPL were about to give remarkable speeches on the foundation of BCPL and on how the IT sector of BCPL works. The BCPL is a Petro-chemical based company that basically produces the main plastic ingredients for making plastic goods. BCPL was dedicated to the nation on February 5, 2016 by Honourable Prime Minister Narendra Modi.

The head of the IT sector explained about how BCPL manages to maintain such a large network for their employees and for the public. During the first part of the lecture, they mentioned all the necessary services that prove for the employees and there was an emphasis on

the communication between employees, such as email services and video conferencing. Therefore, they have their own LAN services, and have their own private intranet. During the lecture they made it clear that redundancy is very essential to save the network from failing. Since it is hard to maintain all the equipment and services present at BCPL, IT sector, they had various services such as ISP for best quality internet, Annual Management Contracts for insurance purposes and SAP as their business intelligence, enterprise research and IT Tools that handle all the web services. These all measures are taken to secure and safeguard the data from natural disaster and human errors. The whole lecture was about more than two hours long. BCPL has their own server room where they not only host their email and web services but they also store their data securely. The server room had to be in a specific temperature and had various equipments such as NOVA gas releaser to prevent fire/smoke in the server room and ultrasonic speaker to repel rodent. Then visited the server room of the BCPL that consisted of Dell Servers and storage in 25 quantity. The network connection topology of BCPL Company is basically of Hybrid Topology consisting of a Ring and Star Topology. After every group had visited the server room we were about to leave the conference room and were instructed to move into the bus. Now it was time to visit the engineering sector of BCPL from where they controlled the plants that process the natural hydrocarbons into polymers. On first entering the building our eyes were caught by the first pictures of the BCPL taken in the past when it had just started, it felt like a museum. It wasn't a long stay, we were headed to our final destination in the BCPL campus. We headed to the production facility where the ready polymers are polished, shaped and packaged for selling.

We were very lucky to get this opportunity to go to the BCPL. Here we were able to gather a lot of practical knowledge about the working of a system and infrastructure of a company. From this though we learned how the technology is helping to make the work easier and helping us to remove the error in the work done in the breaking down the polymers and how normalization is done for the convenience of the system for its better use. Our whole journey was coordinated by Mr. Jayanta Baruah, Chief HR, BCPL. We are thankful to the management of BCPL for giving us the opportunity.

BCA Student's Progression to Higher Education

Batch of 2018

Name of Student	University/Institution
Monit Kumar Gupta	Cotton University
Girija Prasad Handique	Cotton University
Hrittick Priyam Goswami	NERIM, Guwahati
Bhaswat Bhoirab Handique	NERIM, Guwahati
Arunov Saikia	ARGUCOM, Sibsagar
Harish Dutta	ARGUCOM, Sibsagar
Sagar Pradhan	ARGUCOM, Sibsagar
Deepjyoti Mahela	CCSA, Dibrugarh University
Utpal Nath	CCSA, Dibrugarh University
Anshuman Baruah	CCSA, Dibrugarh University

Batch of 2019

Name of Student	University/Institution
Tukhar Sonowal	NERIM University, Guwahati
Taranga Hatimuria	NERIM University, Guwahati
Miganko Rajkonwar	Royal Global University, Guwahati
Alindeep Dutta	Royal Global University, Guwahati
Angsuman Hazarika	Assam Engineering College, Guwahati
Biswajit Mili	CCSA, Dibrugarh University
Ajoy Kr. Kurmi	CCSA, Dibrugarh University
Rushali Chakraborty	Tezpur University
Manash Gogoi	CCSA, Dibrugarh University
Mriganka Das	Presidency College, Bangalore

Add-on Courses Offered in BCA Department

1. A Certificate Course on Hardware and Networking
Semester : 2nd Semester
Teacher : Mr Kakul Bezbaruah



2. A Certificate Course on DTP and Photoshop.
Semester : 3rd Semester
Teacher : Mr Debajit Bora



3. A Certificate Course on Numerical Ability.
Semester : 4th Semester
Teacher : Ms. Himanginee Gogoi



My Experience in BCA



Dibrugarh Hanumanbax Surajmall Kanoi College, in short we call as DHSK college and it is popularly known as Kanoi college is a provincialized college which is located on KC Gogoi path, Dibrugarh, Assam under the affiliation of Dibrugarh University. Our college was established on 15th of June, 1945 and it has approximately a total of 20 departments of which 12 are of art streams and 8 are of science stream respectively and BCA is one of such department.

Myself Sameer Devnath from BCA 5 the semester and I want to share my overall experience as a student on this particular aspect. On the stage that a student takes admission on this particular department of the college, one thing is for sure that the student is interested in the particular subject of computer science, but very few of them might know about the actual scopes that are included in BCA. However BCA stands for Bachelor of Computer Application and its scopes include jobs as a Web

Designer, System Manager, Computer Programmer, Web developer, Software Developer, software tester, etc depending upon the skills of the students that are acquired by them. If I talk about the facilities of the department, it has three smart classrooms well equipped with AC and projectors, each of the classrooms have high configured desktops with i5 processors, lab facility with a large number of desktops, also there are bathroom facilities for the students. There are also kitchen and bathroom facilities separately for the faculty members. Overall these facilities present a perfect scenario of the department.

Next if I talk about learning then as far we are included in the department, it becomes our responsibility to accomplish the various knowledge that are required for us to get a job in certain fields or scopes. The BCA course offers different subjects in each of the semesters including both the hardware and software applications. In order to

increase our knowledge on that field or to increase our skills, some additional courses are also included in each of the semesters such as DTP which includes photoshop and page maker. We are very well aware of it that how these softwares are important in our day to day life. Teachers in the department teach us with full potential and we can easily get the concepts that are provided by them. Here a student sits in a classroom and goes through a lecture, tries to cope up with the surprisingly strenuous syllabus and gets the opportunity to learn from some great research minds. There is also a schedule for studies according to which different subjects are taught such as routines/timetable and syllabus. Moreover, they are also ready to help us in clearing our doubts while off classes through mails. Seminars, assignments, projects and presentations are held annually to increase the confidence well as to test the ability of a student. In addition to this, field studies and educational trips are

also accomplished that provides the opportunity to learn many new things and also helps in developing communication skills. Till now it's about more than two years doing my course on this department and on behalf of that I can willingly say that our teachers put all their effort on us to increase our skills and ability so that we can have an astonishing future. It helps us to be prepared for the upcoming struggles and challenges in life which we can overcome through our determination. The dynamic changes that I've seen through the past years makes the department to be more consistent. Accordingly it is a type of academy that provides us a platform to prepare and generate our dreams into realities. This department helps in the smooth transition where we even do not realise at what stage we became independent.

Sameer Debnath
5th Semester, BCA.

BCA MANAGEMENT COMMITTEE

1. PRESIDENT, GB Adviser (Mr Abhimanyu Baruah)
2. PRINCIPAL & SECRETARY, CHAIRPERSON (Dr S.K.Saikia)
3. VICE PRINCIPAL, MEMBER (Dr. Priya Dev Goswami)
4. COORDINATOR, IQAC, MEMBER (Dr. Mridul Sarma)
5. HOD, COMPUTER SCIENCE, MEMBER (Mr. Harijinder Singh)
6. DEALING ASSISTANT., SPECIAL INVITEE (Sri B J Baruah)

List of BCA Students

First semester Student
Session:2022-2025

Aman Rajbonshi
Abhishek Kr Singh
M.d Ashifur Rahman
Abhijit Kumar Raut
Pobitra Pator
Porshuram Chandra Brahma
Angit Prasad Gupta
Amar Chetry
Abhi Chetri
Harshita Nath
Niraj Kumar Sharma
Abhay Teye
Asis Kullu
Swagata Mech
Arayn Kumar Ekka
Jitpal Gogoi
Shanwaz Khan
Lakhan Limbu
Rahul Gogoi
Ekta Singh Yadav
Ranjit Das
Abhoy Prasad Shah
Ganpati Doley
Talakya Chawrok
Biswajit Chandra Paul
Hangkash Kumbang
Pragyan Deori
Mehfooz Hussain
Dhanti Chetia

Hailing From

Dibrugarh
Tinsukia
Dibrugarh
Dibrugarh
Dikom
Jonai
Jonai
Moran
Moran
Sivasagar
Moran
Dibrugarh
Tengakhat
Dibrugarh
Nahorkatia
Nahorkatia
Dibrugarh
Dibrugarh
Dibrugarh
Chabua
Dhemaji
Philobari
Dibrugarh
Jorhat
Philobari
Dibrugarh
Digboi

Hailing From

Dibrugarh
Dibrugarh
Naharkatia
Naharkatia
Margherita
Lakhimpur
Chabua
Jagun
Dibrugarh
Marherita
Marherita
Naharkatia
Sivsagar
Margherita
Dibrugarh
Silapathar
Dibrugarh
Dibrugarh
Dibrugarh
Tinsukia
Dibrugarh
Chabura
Naharkatia
Silapathar
Margherita
Chabua
Dibrugarh
Bogibeel

First semester Student
Session:2022-2025

Niyar Mukta Dutta
Sandeep Chakraborty
Prashanjeet Dutta
Mehak Khan
Surajyoti Chakraborty
Khogen Gogoi
Podmaraj Boruah
Ashok KumarChawdhari
Aryaman Saikia
Pragyan Gogoi
Ammiyo Paul
Pratham Debnath
Nilotpal Dutta
Debasish Dutta
Sudarshana Sharma
M.d Saif
Dhanjoy Borgohain
Bharat Kardong
Sai Isan Bora
Omkar Bora
Aparna Das
Shuvam Verma
Nihil Shah
Martin Baruah
Dolly Sahu
Rammyajit Deb
Mayank Raj Singh
Pranjeet Dutta
Tinjong Teye

List of BCA Students

Third semester Student
Session:2022-2025

Aditya Mech
Ayuesh Turaha
Bibek Haloi
Bidyut Khound
Biplob Kumar Dutta
Deep Bhakta
Dibyajyoti Saikia
Gaurav Vohora Chetri
Hiren Gohain
Jyotiksha Borah
Khairul Islam
Khusboo Ray
Krinjal Das
Manish bhagat
Mohit Kedia
Nayan Jyoti Athporia
Nilutpol Borpatra Gohain
Omyand Nayak
Polycarp Basumatary
Pradyut Jyoti Kakoty
Rajesh Dutta
Ria Kalita
Ruhit Borah
Sanjay Debnath
Sasankar Gogoi
Shilpi Sikha Boruah
Sourav Pandey
Ujjel Kondpan
Utdwipan hazarika

Hailing From

Dibrugarh
Dibrugarh
Duliajan
Chabua
Titabar
Dibrugarh
Silapathar
Jagun
Karbi Anglong
Bokel
Chaulkhowa
Doomdooma
Dibrugarh
Moran
Dibrugarh
Sibsagar
Lahowal
Chabua
Jonai
Dibrugarh
Dikom
Dibrugarh
Charaideo
Silapathar
Dhemaji
Anguri,
Sibsagarh
Dibrugarh
Chabua

Hailing From

Dibrugarh
Tingkhong
Dibrugarh
Dibrugarh
Dibrugarh
Bamunbari

Third semester Student
Session:2022-2025

Subrata Suman Molia
Jintu Konwar
Lokhen Saikia
Rounak Verma
Ankur Jyoti Medhi
Rana Deb



*"It isn't where
You Came from,
It's where you're
going that counts"*

-- Ella Fitzgerald



DHSK COLLEGE

BACHELOR OF COMPUTER APPLICATIONS, BATCH 2022-25



DHSK COLLEGE

BACHELOR OF COMPUTER APPLICATIONS, BATCH 2021-24





AN INTRODUCTION TO DARK WEB

Ria Kalita, BCA 3rd Semester

“When you jump into the dark web, one click can put your life at stake”

The term dark web refers to encrypted online content that is not indexed by conventional search engines. Accessing the dark web can only be done using specific browsers, such as TOR Browser. There is a great deal of privacy and anonymity that comes with using the dark web compared to traditional websites.

As its name implies, the dark web is a secret network that exists underground. It's made up of a series of websites that are hidden from the general public. This means they aren't accessible through traditional search

engines, such as Google.

Traditional search engines return results because they contain indexes of links to websites. These are ranked based on keywords and relevancy. The dark web, on the other hand, uses information that isn't available on these other search engines, such as content from individual accounts, such as email, social media, banking, along with personal and professional databases, and documents

People often confuse the dark web with cryptocurrencies, which are often used to make purchases there. But there is a distinct difference. The dark web makes it easier to set up and access websites that offer a high degree of anonymity for everyone involved. Many

dark web websites contain only information rather than the ability to buy or sell something. It is true, though, that cryptocurrencies, such as Bitcoin and Monero, are often used for transactions on the dark web. But one does not have to use the dark web to use cryptocurrencies.

The dark web first officially appeared in the early 2000s along with the creation of Freenet, which was developed by Ian Clarke to secure users against government intervention and cyber attacks. The system, which is still available today, allows users to express themselves freely without being tracked online. The U.S. Naval Research Laboratory funded a project called The Onion

Router (TOR). TOR offered intelligence sources a way to communicate easily and safely, especially in hostile areas where personal safety is key.

It is now one of the most common browsers used to access the dark web, using databases to help people make their way around and find the information they need. The rise of cryptocurrencies increased the popularity of the dark web, especially for cybercriminals. That's because digital currencies often provide a great deal of anonymity for people who buy and sell on the dark web.

Despite this, there are people that use the dark web, including political dissidents and people who want to keep certain information private.

TEACHING STAFF OF BCA



Mr. Harjinder Singh



Ms. Pinakshi Konwar



Ms. Adrita Bhuyan



Ms. Himanginee Gogoi

Alan Turing: The Enigma Cryptanalyst



Krinjal Das
BCA 3 rd Semester
D.H.S.K College, Dibrugarh

"Sometimes it is the people no one can imagine anything of who do the things no one can imagine."

Alan Turing

Alan Turing was a brilliant mathematician who was born in London in 1912. He studied at both Cambridge and Princeton Universities. Initially, he worked as a part-time for the British Government's Code and Cypher School, but later on he took a full-time role at Bletchley Park in Buckinghamshire, where his main focus was to crack the 'Enigma' Code.

The Enigma was a cipher device used by Nazi Germany's military commanders to encode the strategic messages before and during the World War II. It was so sophisticated that it amounted to what's now called a 76-bit encryption key. Although Polish Mathematicians had worked out how to read the Enigma messages, but the Germans has increased its security during the war by changing the cipher system daily. This made the decoding task more difficult. Here, Turing played a key role by inventing a machine known as the Bombe. This device helped to significantly reduce the work of the code-breakers.

The legacy of Alan Turing's life and work did not fully come to light until long after his death. His impact on computer science has been widely acknowledged : the annual "Turing Award" has been the highest accolade in that industry since 1966. Turing was a founding father of AI and of modern cognitive science. Moreover, his published design for the ACE was the first complete specification of an electronic stored-program all-purpose digital computer.

Thankyou

NON-TEACHING STAFF OF BCA



Anupam Dutta



Computer Literacy Programme
Among the inmates of
Central Jail, Dibrugarh on 27th September, 2022



Major Project Viva
Taken by Dr. Rizwan Rehman
Assistant Professor, CCSA Dibrugarh University



Parents Teachers Meet, May 2022



Freshers Celebration, 2022



Field Trip to Nari Village, Dec 2021



**Inaguration of BCA building by
Prof. Jiten Hazarika, Vice Chancellor (Dibrugarh University)**



Farewell, 2022



**A Visit To BCPL
(Brahmaputra Polymer and Cracker Limited)**

Editorial Board

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