LBEF CAMPUS
CELEBRATING 20 YEARS 1998-2018
THE FIRST IT COLLEGE OF NEPAL

IN ACADEMIC COLLABORATION WITH
A·P·U
ASIA PACIFIC UNIVERSITY OF TECHNOLOGY & INNOVATION

PATAN COLLEGE for Professional Studies
LEARN TO LEAD

in partnership with University of Bedfordshire

FRESHER'S PARTY

3rd December, 2018

Fresher's Party in any college is an event which every student eagerly awaits from the time of their admission. The 3rd December 2018 was marked as a memorable day in the life of fresher's of 2018-19 batch at Patan College for Professional Studies, Nepal. The Fresher's day was a day that was filled with excitement, joy, music, enthusiasm, laughter, and happiness.

The theme for the Fresher's Party was Disco. The celebration started from 4:30 pm at Club 25 hours, Tangalwood the students were welcomed with the refreshment drinks.
The party started with the welcome address by Suman Gautam and Neha Shrestha host for the event.
The program commenced with the welcome dance by the students of Level 5 followed with ramp walk by freshers. They performed a ramp walk and introduced themselves.
The performance was judged by Faculty. Then from among the students, Mr. and Ms. Fresher was selected.
The title of Mr. Fresher was won by Bidwat Raj Pokhrel and the title of Ms. Fresher was won by Mahima Shrestha. The winners were crowned by previous years Mr. and Ms. Freshers, Susan Tamrakar and Neha Shrestha respectively. Rajesh Rai and Aastha Pandey grabbed the Mr/Ms Best Dress title.

The event also showcased dance performances, beatboxing, card games, band performances, confessions and many other events.

FROM THE DESK OF

EDITOR- IN- CHIEF

Opening Message, Welcome to the Third Issue

Dear Readers,

True guidance is like a small lamp in a dark forest, it doesn't show everything at once, but gives enough light for the next step to be safe.

The essence of teaching and learning is to explore and excel and nurturing the future talent of the world.

Welcome friends, to the third issue (Volume 01, Issue: 3) of the "LBEF Connect", the quarterly Newsletter. This issue brought to you the third time the effort and the outcome of the joint team of LBEF and Patan College team's creation. This newsletter was one such cherished work that had its roots in the persuasion. It is snapshot of the various activities, achievements and advancements for all the associated Institutions of the LBEF Group.

The news and articles are not just information about our institutions, but shows how steadily and consistently we are inching towards the vision and mission of LBEF Group.

I would like to thank all my editorial team members for helping me pull this through. I express my considerable appreciation to all the authors of the articles in this magazine. These contributions have required a generous amount of time and effort. It is this willingness to share knowledge, concerns and special insights with fellow beings that has made this magazine possible. In the last but not the least, I would like to thank the Management of the LBEF Group of Institutions, Mr. P Kejriwal, Founder, Er. Pankaj Jalan ,Chairman LBEF Group of Institutions and Er. Prakash Kumar, Executive Director LBEF Group of Institutions . This publication should not be possible without the unconditional support of them.

Dr. Swati Sah
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EVENTS

Yomari Purnima

23rd December, 2018

Every year in order to celebrate a Newari festival This event Yomari Purnima is organized once in this year as well, the event was held with the huge participation of the entire college as last year. The members of intercultural club organized the event by selling delicious rice cakes infilled with sweet nuts, sugarcane, jaggery called chaku and khuwa (made by milk product). A stall was placed near canteen area. Despite the excitement that student hold, the atmosphere became more ecstatic when all the yomaris were sold with so much of love. All the students and our respected faculty members & staff of Patan College equally contributed on lighting up this moment. The yomari was sold for Rs. 50 each. The event was organized by the Intercultural club, lead by Ms. Neha Shrestha. The fund collected from this money was given for Charity.

X-Mas Day Celebration

25th December, 2018

Patan College, Nepal welcomed and celebrated Merry Christmas by decorating Christmas tree inside college premises. Many attractive games and performances was held. During the Celebration the major attraction was the secret Santa. The entire environment was cheered up by the Santa who was dressed for the occasion.

Social club of Patan College collaborated with Intercultural Club whereby they sold lavishing muffins. The fund gathered from the event was used for charity towards an organization called "Food for Life Nepal".
Students played variety of games like drop the curtain, whisper challenge, spicy ramen challenge. The all day event ended with mesmerizing musical performance from the students of level 6 (BSc & BBA).

Gaming Competition

23rd December, 2018

Patan College for Professional Studies, Nepal hosted the gaming competition whereby participation was collected for three modes namely solo, dual and squad. Students from all levels joined this fun filled competition. A total of 26 students participated in the event. PUBG has been a trending game amoung youths which is normally played via mobile phones and Personal Computer. PlayerUnknown's Battlegrounds is an online multiplayer battle royale.
In the event the winners were Uttam Thapa for solo, Pasang Doma Sherpa and Uttam Thapa in Duo and Simanta Tiwari, Sanil Shrestha, Rashim Joshi & Subarna Shrestha in squad. The students was awarded with medals and Certificates .

SOCIAL- CLUB

PATAN COLLEGE SOCIAL CLUB
& HEART BEAT

30th December, 2018

Keeping with the mission to work for the welfare of the society at large, the Social club of Patan College for Professional Studies, Nepal extended a helping hand to Heart Beat Organization located at Dallu, Kathmandu by donating Stationary items and fund to children that are financially weak to mark the occasion of Christmas and New Year. The students of Patan College dressed as Santa distributed the gifts to those kids, the kids hearts and faces were filled with happiness and excitement with this initiative from the club members. Patan College social club donation and the activity of contributing is a pittance compared with what the organization is doing towards their future development.

The donation program was lead by Yaju Shakya and Bhagawan Bhatta, president and Vice-President of Social Club respectively. The social club also appreciates the financial donation of IT

club for this cause which was collected from the PUBG event. Students of Patan College, Nepal are really grateful to be an part of such an impacting work.

STUDENT'S CORNER

LEFT HALF OF
Artificial Intelligence

Lalit Sunar Student, Patan College, (Level 5 BSc.)

"I'm an advocate for whole brain thinking. I'm not an advocate for the right brain or left brain"- Jill Bolte Taylor

These days we can find ourselves surrounded by AI featured machine around us. They can solve problem which cannot be solved by simple computer programs. We may not often feel but we are surrounded by AI more than we think. Face recognition, virtual assistant, stock prediction, recommendation, sexual or violence content filtering, pattern recognition and so on. By looking at these things like alphago go program which defeated human player or Sophia robot who became citizen of Saudi Arabia, it seems like we are at the verge of creating AI powered world. But I think we are only half way there.

"There's difference between knowing the path and walking the path"- Morpheus (the matrix Movie)

We can see clearly how impossible things like recognizing human face, predicting stock exchange rates are being done. But first when human dreamed of creating or mimicking human intelligence, they didn't just want to mimic certain features of human like vision, listening, prediction on the base of pattern instead they wanted whole intelligent machine. But still important things like semantic reasoning, deduction, common sense, extraction of meaning from words and texts are still lacking. You can relate with it clearly if you find it hard to some human intelligence in famous virtual assistant like Cortana, Siri or google. Even though they have access to world wide data, but they don't even know what to tell, if I ask them what was the last question that I asked.

These days, we are creating a powerful neural network which are working by adjustment of weights and biases for training. These includes large dataset to train and teach machine to draw out inference or pattern by experience. But here we don't have doubt they are not aware what they are really doing. They are just like a chimp who are solving puzzle for banana without knowing they are doing.

Most of AI technologies are mainly dealing with pattern. They are just dealing with large set of data without internally using knowledge. They don't have broader sense of awareness. They are operating without clear internal representation of logic, knowledge and fact. These action of dealing with pattern is much more like function of Right human brain which works on intuition without definitive knowledge and reasons. But I believe if we want to achieve full potential of Artificial Intelligence then we have to use how our whole brain works not just sing one part of it.

"Simple can be harder than complex, you have to work hard to get your thinking clean to make it simple"-Steve Jobs

If I ask you what is harder, shopping or playing chess? if you are like simple human (not nerd or geek) then you will say playing chess. But It's not the same for machine. Where chess has its own definitive rules and algorithm which can be easily followed by machine but there are not certain or specific rules or algorithm for shopping. Even though ten-year kid can do shopping but for machine it would require much more knowledge and awareness.

Even though we might fail to appreciate but even simple task such as shopping are much more complex from programming point of view. Human are programmable being. Our heuristics, common sense, believes are programmed into us from use childhood by parents, teachers, society and friend circle. Every Human being has their own view of world which has been shaped by their sense of perception and belief. Many of them are also the result of thousands of years of evolution. Every knowledge in our brain is layered and almost linked with each other. Our view of world just doesn't have cluster of knowledge, fact and rules but also a heuristic to draw relationship among them when needed.

Ram likes Hari. But he doesn't like him.
Ram likes Hari. So, he bought gift for him.
In first line, we can conclude that 'he' refers to Hari. But even though first sentence is same but in second line 'he' refers to Ram. Our mind has an amazing ability to understand pronounce.
Now, imagine how hard is it to teach machine.
This task requires reasoning using knowledge about the problem and an abstract view of the world (i.e. common sense). This completion of task doesn't only depend upon present possible options or given variable but also dynamic combination to deal with dynamic condition to reach for conclusion. For this we must model knowledge about the world in a way a machine can efficiently process it, i.e as an ontology or knowledge base. There are huge layers of knowledge which we use unknowingly and efficiently but our mind deducts many things like sherlock Holmes every single time. Consider this example:

A man is looking at his baby while his baby is talking his first step.
And if I ask you, how this man is feeling right now, you can say he is happy but how you mind is deducing this. In the background of your mind, your mind is processing the information such as:
Parents loves their child,
First step of child is important moment of life,
You feel happy for people you love when they are doing something important.

Even though sentence words are vague but your mind processes information somehow in this way. So, if we want our machine to learn deduction, reasoning and inference, we must find a way to feed human knowledge to machines.

"Thinking is skilled work. It is not true that we are naturally endowed with ability to think clearly and logically-without learning how, or without practicing."-A.E Mander
There are many ways of representation of knowledge and modeling of knowledge. For simpler representation we can use "knowledge graph" which is composed of triples of the form i.e subject, predicate and object. And for more complex representation we can use predicate calculus. Even if we try to build simple machine with common sense of small kid, we have to build very complex knowledge base models and it can take many years to program every detail to provide sense and awareness of real world.

But thanks to many initiatives like Cyc, FIBO, SUMO or the DBpedia Ontology, we don't have to build them from ground up. We can extend existing knowledge models. This way will not only support the retrieval of knowledge, but it can be reasoned with. They will provide us power of reasoning, inference, processing can dynamically to answer question and not only that we can also use them as proposition to draw out conclusion from them. These semantic solutions mainly deal with modeling the world and use human-like reasoning over those knowledge methods rather than depending upon procedural and specific algorithms or learn from experience (i.e training) like most of the technologies are doing these days. By using semantic reasoning, we will be able to transfer knowledge base to machines which will not only let them perform our given task but be aware of what they are doing. This will also provide transparency because they solution will be based on reasons rather than random adjustment in weights on weights and biases. I believe this is how humanity will build truly Intelligent machines.

Saujan Aryal Student, Patan College, Nepal (Level 6 BSc.)

WRITTEN STATEMENT

I undoubtedly can propose this statement, "None of us ever had the satisfaction we wanted in our life". Me, personally can't wait to get this off my chest cause it would be relatable and relevant to so many of us that it will certainly both suffice as well as surfice.
We all have wanted to do something different than we are doing now. It might not be uniquely brilliant or adequately excellent but that is what we wanted to do. So, these words I scramble and put out are for all of us dreamers.

सोचेको थिए केहि गरिएला नि जिन्दगीमा
माथि चड्ने कममा, कति ठेस खाइएला यो जिन्दगीमा
भकानिदै रोएका ती सबै समय, खुशी साथ् हार मानेकै हू
भन्या जस्तो हुने भए, कहाँ पुगिन्थ्यो यो जिन्दगीमा

तर गरे पनि धेरै होला, टरे पनि धेरै होला
साना- ठूला सबै कार्य, डुवाउने कि भिजाउने खोला?

But risks by risks, I have smiled from the cries
With so much? Nope, nix, I have made my way through to the skies
Life is clever, you just gotta outplay the maker
Born to be mediocre, Well! But I've learned to fly

FACULTY ARTICLE

INDUSTRY 4.0

Mr. Rabi Raunyar Assistant Professor (IT) LBEF Campus, Nepal

The term Industry 4.0 involves a potential of another industrial revolution—one that weds propelled manufacturing strategies with the Internet of Things to make manufacturing frameworks that are not only interconnected, but communicate, examine, and use information to drive further clever activity back in the physical world [1].

Industry 4.0 alludes to another stage in the Industrial Revolution that centers intensely around interconnectivity, computerization, AI, and ongoing information. Industry 4.0, additionally here and there alluded to as IIoT or brilliant assembling, weds physical generation and activities with keen advanced innovation, AI, and huge information to make a progressively comprehensive and better associated biological system for organizations that attention on assembling and store network the executives. While each organization and association working today is extraordinary, they all face a typical test—the requirement for connectedness and access to constant bits of knowledge crosswise over procedures, accomplices, items, and individuals [2].

Evolution of Industry from 1.0 to 4.0
There are four different industrial revolutions that the world either has experienced or keeps on experienced today.

The First Industrial Revolution
The first industrial revolution occurred

Figure: Industry 4.0 [3]

between the late 1700s and mid-1800s. Amid this timeframe, manufacturing advanced from concentrating on manual work performed by individuals and supported by work animals to a more upgraded type of work performed by individuals using water and steam-fueled motors and different kinds of machine instruments.

The Second Industrial Revolution

In the early piece of the 20th century, the world entered a second industrial revolution with the presentation of steel and utilization of electricity in industrial facilities. The acquaintance of electricity empowered manufacturers with increment proficiency and helped make industrial facility apparatus progressively portable. It was amid this stage large scale manufacturing ideas like the sequential construction system were acquainted as a route with lift productivity.

The Third Industrial Revolution

Beginning in the late 1950s, a third industrial revolution gradually started to develop, as producers started consolidating progressively electronic—and in the end PC—innovation into their industrial facilities. Amid this period, producers started encountering a move that put less accentuation on simple and mechanical innovation and more on digital technology and automation software.

The Fourth Industrial Revolution, or Industry 4.0

In the previous couple of decades, a fourth industrial revolution has risen, known as Industry 4.0. Industry 4.0 takes the accentuation on digital technology from late decades to an unheard-of level with the assistance of interconnectivity through the Internet of Things (IoT), access to real-time data, and the presentation of digital physical frameworks. Industry 4.0 offers an increasingly exhaustive, interlinked, and all-encompassing way to deal with manufacturing. It associates physical with advanced, and takes into account better coordinated effort and access crosswise over divisions, accomplices, sellers, item, and individuals. Industry 4.0 enables entrepreneurs to all the more likely control and see each part of their task, and enables them to use moment information to support profitability, improve procedures, and drive development.

Applications of Industry 4.0

Identify opportunities: Since associated machines gather a enormous volume of data that can illuminate upkeep, execution and different issues, just as break down that data to recognize examples and bits of knowledge that would be inconceivable for a human to do in a sensible time allotment, Industry 4.0 offers the open door for producers to upgrade their tasks rapidly and effectively by comprehending what needs consideration.

Optimize logistics and supply chains:

An associated supply chain can modify and oblige when new data is introduced. In the event that a climate postpone ties up a shipment, an associated framework can proactively acclimate to that reality and change manufacturing needs.

Autonomous equipment and vehicles:

There are shipping yards that are utilizing autonomous cranes and trucks to streamline tasks as they acknowledge shipping compartments from the ships.
Robots: When feasible for huge projects with similarly vast spending plans, robotics are presently progressively reasonable and accessible to associations of each size. From picking items at a warehouse to preparing them to transport, independent robots can rapidly and securely bolster makers. Robots move products around Amazon distribution centers warehouses and furthermore decrease costs and permit better utilization of floor space for the online retailer.

Additive manufacturing (3D printing):

This innovation has improved massively in the most recent decade and has advanced from basically being utilized for prototyping to real creation. Advances in the utilization of metal added substance fabricating have opened up a great deal of potential outcomes for production.

Internet of Things and the cloud: A key part of Industry 4.0 is the Internet of Things that is portrayed by associated gadgets. In addition to the fact that this helps interior tasks, yet using the cloud condition where data is kept, gear and activities can be advanced by utilizing the bits of knowledge of others utilizing a similar hardware or to permit littler enterprises access to innovation they wouldn't probably alone [3].

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