An Undertaking of Bhaktapur Municipality

Khwopa Engineering College

Affiliated to Purbanchal University

BAISAKH 2080 ISSUE 13 NEWSLETTER

Exchange of Greetings on the Occasion of the Biska Jatra and the New Year 2080

Chief guest Mayor of Bhaktapur Municipality, and the chairman of the college management committee, Mr. Sunil Prajapati, with college faculties.

29th Chaitra

On the occasion of Biska Jatra and New Year 2080, Khwopa Engineering College

and Khwopa College of Engineering jointly organized a program to exchange greetings in the college hall on Wednesday, Chaitra 29, 2079. The chief guest of the program was the Mayor of Bhaktapur Municipality, and the chairman of the college management committee, Mr. Sunil Prajapati, who expressed his belief that the arrival of the New Year would add more energy to everyone and inspire everyone to remain committed to working for the institution in the coming days.

Stating that the election was a battle of ideas and principles, he made it clear that the ruling party, which won the election based on money,

would serve their own interests only and work for position and money rather than the

interests of the country and the people.

Informing that Bhaktapur Municipality has started Khwopa College of Law this year, he said that when skilled young people of Nepal

go abroad, the colleges here have to face losses, which is a matter of misfortune for the development of the country.

He said that Bhaktapur Municipality is developing Bhaktapur city as a center of attraction for internal and external tourists by conducting sports and cultural competitions to keep Bhaktapur alive.

In the program, the principal of Khwopa Engineering College, Er. Sujan Maka encouraged the faculty and staff of the college to be more committed and dedicated to fulfilling the objective of establishing the college. Similarly, the vice principal of Khwopa Engineering College Rabindra Phonju, and the vice principal of Khwopa College of Engineering Ratna Shova Prajapati, suggested that the library is the main base for developing a reading culture and that the faculty and staff of the college should continue their reading culture.

Both colleges' administration heads, Mr.

Siddhiram Suwal and Mr. Sanjaya Manandhar, Architecture department head Archana Bade Shrestha and Electrical engineering department

head Rakesh Gwachha, wished that the New Year should add enthusiasm to everyone and inspire them to work energetically.

Students at Khwopa Engineering Colleges Share Insights on "Life 3.0" and "Atomic Habits" at Book Talk Program

9th Chaitra

The Library Section at Khwopa Engineering College and Khwopa College of Engineering recently organized a book

talk program on Chaitra 9, 2079 Thursday. The program featured two presentations by Computer Sixth Sem students, Bibhishika Dahal and Eima Lama, who presented on

books entitled "Life 3.0" by Max Teg Mark and "Atomic Habits" by James Clear, respectively.

Er. Sunil Duwal, Principal of Khwopa College of Engineering, praised the efforts of the students and emphasized the importance of reading books. He stated that reading books helps people choose the correct path and improve their lives. Additionally, Er. Rabindra Phoju,

Vice-Principal of Khwopa Engineering College, explained Artificial Intelligence during the program. He shared that he has been following the message of the book "Atomic Habits" and has seen positive impacts on his life.

Jastara Koju, Head of the Library Section, welcomed the participants and elucidate the objectives of organizing the program. The book talk program was a great opportunity for the students to share their insights and gain new perspectives on their chosen books. Overall, it was a successful event that encouraged enthusiasm for reading and learning among the faculties, staffs and students.

KhEC Robotics Team Showcase Their Skills at Techkriti Event in IIT Kanpur, India

10th Chaitra

A group of six students from department of Electronics and Communication Engineering, KhEC, Nepal, participated in the annual four-day inter-collegiate technical

and entrepreneurship festival, Techkriti, held at the Indian Institute of Technology (IIT), Kanpur. The team participated in the Bot Maneuvering competition, which challenged the participants to design and build a robot that could navigate a complex obstacle course within a set time limit.

The group had been preparing for the competition for several months and traveled from their college in Nepal to IIT Kanpur. They visited various laboratories at IIT Kanpur, including Mechanical and Electronics and Communications, where they learned about the latest technology and advancements in the field of robotics.

On March 24, the group participated in the Bot Maneuvering competition at Techkriti. They defeated team "Vinayak" from NIT, Warangal in the first round but unfortunately got defeated in the next round. Despite not winning the competition, they gained a lot of knowledge and insights into the latest technology and resources used by other teams.

The event provided them with valuable networking opportunities, and they met several participants from different countries, including Nepalese students who were pursuing their masters and PhD degrees at IIT. The team hopes to inspire others to pursue their passion for robotics and strive for excellence in this

field.

The group's participation in the Bot Maneuvering competition was a great learning experience and allowed them to showcase their skills and represent their country on a global platform. The team's success at the competition is a testament to the talent and dedication of Nepalese students and their potential to make significant contributions to the field of robotics.

Irrigation Engineering Field Visit for Civil Engineering Students (2076 Batch)

10th Chaitra

The Department of Civil Engineering, Khwopa Engineering College, recently organized an irrigation engineering field excursion for their sixth semester 2076 Batch students. The excursion, which took place

from the 7th to the 10th of Chaitra, 2078, was led by Er. Umesh Sukamani, Er. Shyam Sundar Basukala, Er. Saroj Phaiju, Er. Rajesh Khatakho, Er. Jeetendra Prajapati and Lab Assistant Amar Karmacharya. The objective of the trip was to allow the students to gain a practical understanding of the theoretical knowledge they had learned during the irrigation engineering course.

During the tour, the 96 students visited the Bagmati Irrigation Project in Sarlahi district. They were able to observe the barrage gates, under sluice, fish ladder, and other structures at the headworks, as well as cross drainage structures such as the inverted siphon and level crossing along the canal alignment. Additionally, the students observed structures like the silt excluder and canal embankment.

On the excursion, the students also visited the headwork of the Khageri Irrigation Project on their way to the Narayani lift Irrigation. At the Narayani lift irrigation site, the students observed the lift system, which uses two lifts to withdraw water from the Narayani River to serve the upper terraces of the area.

The excursion also included sightseeing of various touristic areas like Janaki Temple at Janakpur, Bharat Tal at Sarlahi, Sauraha and

Devghat. The irrigation engineering field excursion provided the students with a valuable opportunity to gain hands-on experience and deepen their understanding of the subject matter.

Award Handover and Felicitation to Winners

13th Chaitra

A program was organized on 13th of Chaitra at a college to felicitate the winners of the Geotechnical model competition. The competition was organized by Nepal Geotechnical Society on 14th of Falgun, 2079,

and the models were exhibited during the International Conference on Geotechnical Engineering on 2nd and 3rd of Chaitra, 2079. A group of 6 students from the Department of Civil Engineering, 8th semester (2075 Batch), secured the first position in the competition.

The winners were awarded with the trophy, cash prize of NRs. Twenty-five thousand and indivisual certificates. The trophy and the cash prizes were handed over to the college and students were felicitated with souvenirs from the college. In the program, Er. Sujan Maka, the college principal, congratulated the students and spoke about the importance of such participation as a platform for the preparation for the learning of necessary skills for the future. He highlighted the significance of not only technical but also managerial and other soft skills to exhibit one's capability in their respective fields.

Vice Principal Er. Rabindra Phoju also spoke about the significance of students taking part in competitions, which may open up further opportunities to students and enhance their learning in teamwork. Bishesta Thapa, representing the winning group, shared her experience during the preparation and participation in the competition.

The Geotechnical model competition provided a platform for the students to showcase their talent and skills in the field of Geotechnical engineering. The college is proud of students' achievement and is committed to providing more opportunities to the students to showcase their potential in the future.

A book review on "Life 3.0"

Review by:

9th Chaitra

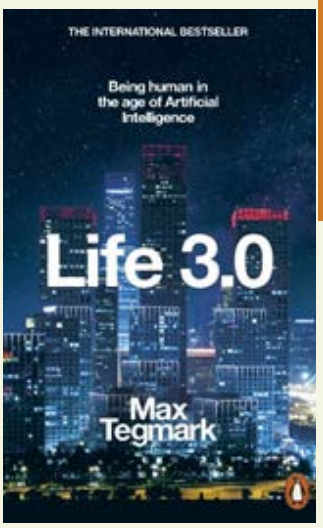
"Life 3.0: Being Human in the age of AI" is a book written by Max Tegmark. It discusses on Artificial Intelligence and its impact on the future of life on Earth. It also discusses about potential future for humanity, technology and the combination of both.

Max Tegmark is a Swedish-American physicist, cosmologist and machine learning researcher. He is a professor at Massachusetts Institute of Technology and a president of Future of Life Institute. He has written books like: Life 3.0 and Our Mathematical Universe.

Our cosmos was created about 13.8 billion years ago by the Big Bang. Life then started to emerge some 4 billion years ago. With the advancement of technology, the life on earth can thrive not just for billions of years but for centuries. In this book, Tegmark introduces the concept of Life 1.0, Life 2.0, and Life 3.0 to describe different stages of life on earth. According to Max, Life 1.0 is the earliest known life (i.e. a bacteria). It cannot develop its own hardware and software. Both are influenced by DNA and modified by evolution. Max refers to us humans as "Life 2.0" since we can create our own software by picking up new skills in areas like languages, sports, and careers. The ability to adapt has allowed mankind to rule the globe. The birth of a technological species starts with Life 3.0. It can design both its hardware and software causing Intelligence Explosion and Artificial General Intelligence.

Tegmark defines intelligence as the ability to accomplish complex goals. The more complex the goals the more intelligent. This definition is inclusive of biological and AI. According to him, intelligence is all about information processing. It doesn't matter whether the information is processed by carbon atom in neurons in brain or by silicon atoms in today's computer or some kind of elementary particles in tomorrow's technology.

In this book, AI is defined as computer programs or machines that can perform tasks that typically requires human intelligence such as recognizing speech, images and playing games whereas Artificial General Intelligence



(AGI) refers to the hypothetical future AI system that possess human-like intelligence and can perform a broad range of cognitive tasks including reasoning, problem solving, learning and creativity. If AGI surpasses the level of intelligence of human beings, it gives rise to intelligence explosion. The author has mentioned that, this scenario could lead to "singularity" a point the progress of AI becomes so rapid that it becomes difficult for humans to control. So, will Intelligence Explosion lead to humans being liberated from need to work or complete eradication of human race? It is all in our hands.

The Near Future

Though AI has a potential to bring huge benefits, it can also bring major threats. Any bugs or flaws in the design process of AI may be a major threat to mankind. Hence the author advised us to be proactive rather than reactive. He encourages us to plan ahead, get things right the first time because that might be the only time we have.

Tegmark has warned us to ensure the systems are robust and bug-free before using AI in large scale. In the book, the four main areas of technical AI-safety research has been mentioned and they are:

- Verification: building the system right
- Validation: building the right system
- Security: against malware and hacks
- Control: the ability for humans to monitor and change system behaviors if necessary.

The Distant Future

Depending on how AI is being designed and will be designed, AGI can vastly change the future in the next 10,000 years and beyond. Tegmark explores various options on whether human and technology coexist peacefully or whether

AI will take over the world and the humans will face an existential crisis.

Aligning Goals

We are always working to make our lives easier with the advancement of technology. So, to make the best use of AI we develop, we must make sure that the goals of AI must align with ours. We can do this by making AI learn, adopt and retain our goals. Such type of AI is termed as Friendly AI.

Tegmark highlights the significance of continued study and discourse on AI and its future, as well as the necessity of public participation and education to guarantee that people are aware about and participating in the development of AI.

This book is for anyone who is interested in AI and its future because the author develops various scenarios to evaluate the potential future of life as well as the technology on Earth which makes the book interesting.

Images from Educational Tour