Geeta University organizes Junior Hackathon – 2022 to encourage technology enthusiasts and aspiring engineers in the student community to transform their tech ideas into reality with the help of cutting-edge technologies like Artificial Intelligence (AI), Machine Learning (ML), Internet of Things (IoT), Robotics, Drones, Blockchain, Gaming, Digital Twin, Cyber Security and edge/fog computing.

About the Event

Junior Hackathon is a trans-disciplinary event aimed at encouraging and empowering young minds from 10th graders through 12th graders, to employ cutting-edge technologies like Artificial Intelligence (AI), Machine Learning (ML), Internet of Things (IoT), Robotics, Drones, Blockchain, Gaming, Digital Twin, Cyber Security, edge/fog computing, Web Development, Coding and App Development to solve real-world social problems and to achieve sustainable development goals (SDGs). It aims to encourage innovation, creativity and entrepreneurial thinking, teamwork, and instill other skills in a time-framed manner. Students from a variety of streams can take part in this event to build a creative solution to the problem at hand. This event also motivates students to come up with long-term solutions that would benefit the society and the environment in a sustainable manner. During this time-framed event, the participants experience teamwork, collaborative thinking, goal-focusing, brainstorming for solving a challenge they are faced with, and presenting it in front of the other participants and a panel of judges. A comprehensive assessment of the situation, clarity of mind, creative and effective solutions, team's coordination and collaboration abilities are weighed in this event. The imaginative solutions of a young brain can be employed to solve the problem on a larger scale.

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NH-71, Naultha, Panipat, Haryana
www.geetauniversity.edu.in

GEETA UNIVERSITY
Panipat, Delhi NCR, India

Geeta University

invites you to

Geeta Junior Hackathon 2022

Date : August 19, 2022

Venue: Geeta University, NH-71, Naultha, Panipat

Idea Submission

Eligibility

The following are the eligibility criteria for the participants to be part of the Junior Hackathon 2022. Students

- Students from 10th graders through 12th graders.
- Team limit is up to 4 members.
- Team must bring the presentation of the problem statement along with the solution.
- Understanding of the problem statement and proposed solution.
- Teams can associate at most one mentor for their team. However, mentors can also be provided from the host institute if required.
- Multiple teams from a single school can participate in this event.

Format

The participants need to download the format from this link: https://docs.google.com/document/d/1OjxiM9TiZbaV8TscrzjFTLgVvWyyUfeSPfJcHo5cS7M/edit?usp=sharing
After downloading the format, the participants need to fill required details and information and convert the Doc file into PDF.

I. During entering the details of Idea sector (Introduction) and target sector (Problem), the participants need to include broad area code (For example: “JHI: Gamification”).
2. The participants need to register and submit the idea in format on the following link : https://forms.gle/RGAiuCGKtYY2YBVKA

- During registration, the team leader/members need to fill the required details in the form and upload the PDF file. While submitting the PDF file, the name of the file should be represented with team name.
- Registration Fee need to be paid by participating team latest by 4th August till 4:00 PM.
- Kindly mention the details of team name and project title during the payment of registration fee.
- The payment receipt (PDF, JPEG, PNG) need to be uploaded in the google form link https://forms.gle/LKIyno6Mvn5XtJcv7

Problem Statement Areas

The United Nations (UN) has formulated sustainable development goals (SDGs) for achieving social, economic, and environmental sustainability. The integration of Industry 4.0 enables to achieve of the SDGs sustainably. Industry 4.0 alludes to the fourth industrial revolution, which combines fast-expanding technologies such as the Industrial Intern internet of things (IoT), artificial intelligence (AI), machine learning (ML), robotics, cyber security and advanced computing to drastically alter the industry environment. Industry 4.0 is represented by the four primary technologies such as i) data, connectivity, computational power, ii) Intelligent Analytics, iii) Automation and iv) advanced manufacturing technologies. The following (but not limited to) are broad problem areas –

I.Gamification (JHI)

Gamification is the application of game-design elements and game principles in non-game contexts. It includes a set of activities and processes to solve problems by using or applying the characteristics of game elements. Games and game-like elements have been used to Educate, Entertain and Engage for thousands of years. Some classic game elements are; Points, Badges, and Leaderboards. It’s been proven that competition in the workplace drives productivity. From leaderboards to experience points, from levels to virtual badges; there’s plenty of ways to implement this on your learning solution!
Key ingredients:
Meaning—Games or game elements must connect the activity to the learner’s goals or interests. Simply accruing points is meaningless; earning “bragging rights” for winning a badge that the players and their community don’t value is equally meaningless. A game must be based on meaningful goals.
Mastery—Learning becomes fun when mastery of a skill or learning information is done via interesting challenges. Deterding says that pairing a goal with rules that determine how one may or may not pursue the goal is what creates interesting challenges. To keep players engaged, the goals must get progressively more challenging, and there must be a mix of achievable short-term goals and longer-term goals. This provides some success as well as opportunities to fail, learn from that failure, and continue advancing toward a larger goal.

Autonomy—Play is voluntary, and “if you add an if/then reward to a specific activity, you curb the felt autonomy of the person,” Deterding said in a Google Tech Talk, “Meaningful Play: Getting Gamification Right.” Placing contingent rewards on an activity can devalue the activity and demotivate participants.

2. Energy Management/ Green Energy (JH2)

Renewable energy integration and energy efficiency are essential factors for achieving long-term energy sustainability and mitigating climate change. In Energy management, the integration of IoT/IIoT, AI/ML, Robotics/Drones, Big Data, Blockchain, Digital Twins, AR,VR/XR, Cloud Computing, and Edge/fog computing can be used for smart grid, smart microgrids, fault detection and diagnosis, energy trading, energy storage, energy supply chain, smart meter, smart transformer, and more.

3. Waste Management/Green Earth (JH3)

According to a World Bank estimate, an individual in a developing country produces an average of 0.45 - 0.50 kg of municipal solid waste. The cities and towns of Bangladesh generate approximately 17,000 tons of waste per day most of which do not get treated or disposed off in the right manner. Within the next 25 years, the number is estimated to reach 47,064 tons per day. Innovative ideas are invited which aim to put in force sustainable systems of waste collection, segregation, and treatment along with a controlled, systematic and creative ways of reducing waste generation across the country.

4. Industry Innovation and Infrastructure (JH4)

Industry 4.0 is revolutionizing the way companies manufacture, improve and distribute their products. Manufacturers are integrating new technologies, including Internet of Things (IoT), cloud computing and analytics, and AI and machine learning into their production facilities and throughout their operations.
Industry 4.0 concepts and technologies can be applied across all types of industrial companies, including manufacturing, oil and gas, mining, health, agriculture, finance, tourism, music, theatre, arts & humanity, toy etc.

5. Sustainable Economy (JH5)

Sustained and inclusive economic growth can drive progress, create decent jobs for all and improve living standards. Innovative ideas that address the economy and growth related issues such as productivity, employment, poverty etc. Sample issues are - providing youth the best opportunity to transition to a decent job calls for investing in education and training of the highest possible quality; providing youth with skills that match labour market demands; giving them access to social protection and basic services regardless of their contract type, as well as levelling the playing field so that all aspiring youth can attain productive employment regardless of their gender, income level or socio-economic background; implementing adequate health and safety measures and promoting supportive working environments are fundamental to protecting the safety of workers, especially relevant for health workers and those providing essential services.

6. Smart city/ Automation (JH6)

Ideas focused on the intelligent use of sources for transforming and advancement of technology with combining AI to explore various sources and get valuable insights. Being smart makes a city more able and agile to move from one level to the next, guided by principles of making most from limited resources, taking everyone along, quickly adapting to changes, being resilient in the face of stresses or shocks at each stage, and using technology mindfully at every step of the way to reach scale and speed.

7. Legal Practices (JH7)

Industry 4.0 is revolutionizing the way companies manufacture, improve and distribute their products. Manufacturers are integrating new technologies, including Internet of Things (IoT), cloud computing and analytics, and AI and machine learning into their production facilities and throughout their operations.
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8. Others (JHO)

Problems not falling under any of above categories are also invited if having significant contribution to the society.

Steering Committee

Role	Name
Chief Patron	Dr. Vikas Singh (Vice-Chancellor)
Patron	Dr. Gulshan Chauhan (Pro Vice-Chancellor)
General Chair	Dr. Amit Gupta
Convener	Dr. Vaishali Mehta
Organizing Secretary	Dr. Archana Sandhu

Organizing Committee

Role	Name
Registration	Dr. Anand (School of Management)
Technical	Mr. Avinash (CSE) Ms. Deepali (Pharmacy)
Finance	Dr. Sunaina (Pharmacy)

Student Coordinators

- Tushar Kumar (9588360361)
- Aditya Srivastava (6299024632)

Important Dates

Category	Date
Idea submission and Registration	August 15, 2022
Fee submission	August 18, 2022 (Till 4 PM))
Event date	August 19, 2022

Registration Details

Category	Date
Team Registration	500/-
Individual Registration	300/-

Account Details

Account Name	Geeta University
A/c No	50200066784802
Bank Name	HDFC Bank
IFSC Code	HDFC0001730