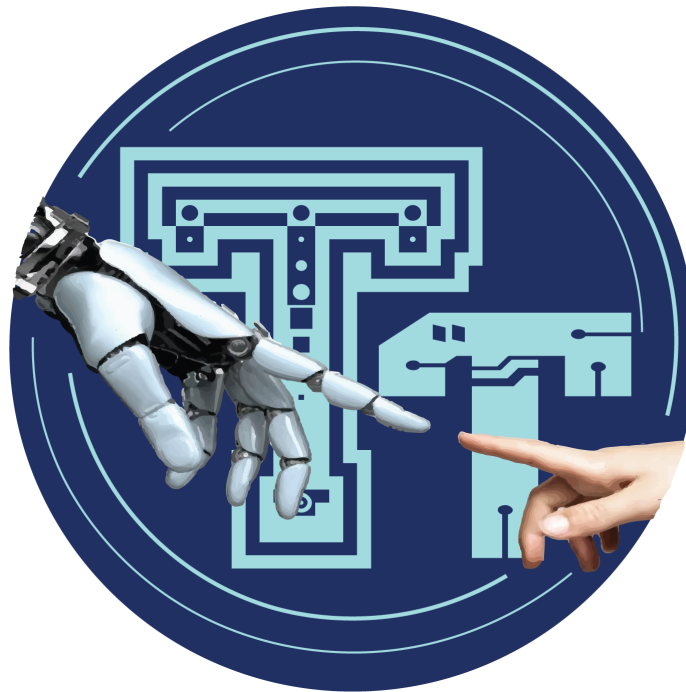


Manipal Institute of Technology

Presents



TECHTATVA 2023
CATALYSING EVOLUTION

Official Rules and Regulations

TECHTATVA 2023

INDEX

FLAGSHIP EVENTS	4
AEROVERSE	4
SKYRUSH	4
INVESTIGAR	5
PAPER PRESENTATION	5
KRAFTWAGEN	7
OFF-ROAD MAYHEM	7
VEDANTH	9
VEDANTH 13.0	9
ROBOWARS	11
REGULAR EVENTS	12
ACUMEN	12
TESSERACT	12
AIB	13
AEROVERSE	15
ICARUS	15
ALACRITY	17
FOXHUNT: RACE TO FIND WATER ON MOON	17
ARCUS	19
SUSTAIN-A-BUILD	19
BIZZCOM	21
QUANDARY	21
MONOPOLY	22
CODE RED	24
CODEFUSION	24
COSMICCON	25
ASTROPHOTOGRAPHY AND POSTER MAKING	26
ESCAPE ROOM	26
EPSILON	29
MEDTECH MAYHEM: QUIZ AND DEBATE	30
ESCAPE VELOCITY	35
ORK WORKSHOP & VIRTUAL ROCKET BUILDING COMPETITION	35

FOSSIFY	37
OPEN-SOURCE CRYPTIC HUNT	37
MECHANIZE	38
INNOFRAME	38
MECHATRON	39
CHAKRAVYUH	39
KICK OFF	41
MIT-GPT	43
CIPHER	43
SYNAPSE	44
ECHO	44
CONTACT US	45

FLAGSHIP EVENTS

AEROVERSE

SKYRUSH

- **Event Description:**

Welcome to Skyrush'23, an event that allows you to engage in a competitive showcase of your Remote-Controlled (RC) Aircrafts and Drones. Participants are encouraged to showcase their engineering prowess to win exciting rewards in this fast-paced, problem-statement-based competition. Teams must develop innovative mechanisms and come up with an original design to complete this year's problem statement. Get your teams ready to compete in a festival of flight.

- **Number of Rounds: 1**

- **Rules:**

1. Team size is limited to a maximum of **6 members**.
2. The aircraft must conform to the design constraints.
3. Any aircraft presented for the competition must be of an original design whose configuration is conceived by the student team members.
4. Teams registering must submit a Technical Design Report, 2D Drawing, Technical Data Sheet, and Aircraft CAD before reporting for the competition. The team shall be disqualified if the submission is not made on the specified date and time.

- **Judging Criteria:**

1. Flight score =
$$\frac{(0.9 \times \text{Weight of Payload})}{(\text{Time of Flight} + 0.6 \times \text{Landing Distance})}$$
2. The teams will also be judged on their Technical Design Report, 2D Drawing, Technical, Data Sheet, and Aircraft CAD.

INVESTIGAR

PAPER PRESENTATION

- **Event Description:**

This event aims to provide a platform to present a research paper on a topic of the individual's interest in front of an esteemed panel of adjudicators. Participants need to submit their selected research paper and prepare a presentation elucidating their work in their own words.

- **Number of Rounds: 1**

- **Rules:**

1. Participation: **Individual** Sub-categories of the event are as follows:
 - a. Computer Science: CS, IT, CCE, Data Science, AI.
 - b. Electrical: EEE, ECE, EIE, IC, Biomedical.
 - c. Biochemical: Biotechnology, Chemical.
 - d. Mechanical: Mechanical, Automobile, Aerospace, Aeronautical, Civil, IP.
Others: Miscellaneous (domains excluded in previous sub-categories- e.g.: Physics, Mathematics, etc.).
2. Participants must choose a specific sub-category according to the domain of the paper they choose to present. Please note that a participant can only enter in one sub-category.
3. Participants must upload their chosen research paper, their presentation, and the subcategory chosen in the Google form released 24 hours before the event.
4. The time limit of the presentation is 7 minutes. Any content covered after the same will not be considered.
5. Judging and consequent prizes for each sub-category will be processed separately.
6. Participants are free to choose any published research paper in the domain of their choice and may not necessarily be authored by themselves.

● Judging and Marking Criteria:

1. Engagement (10) - Ability to generate interest of the audience in the presentation.
2. Research (20) - Extent of research done; concepts explained cohesively; Lack of plagiarism and originality of content; All references mentioned.
3. Usage of sites like Wikipedia is highly discouraged.
4. Language (10) - Quality of diction used.
5. Delivery (10) - Clear and concise delivery.
6. Knowledge (20) - Quality of answers to the questions posed by the judges; understanding of the concepts; ability to think of its future potential and real-world applications Please note that any form of plagiarism, if found, shall incur hefty penalties to the final score. The presentation will be prepared solely by the participant in their own words.

KRAFTWAGEN

OFF-ROAD MAYHEM

- **Event Description:**

Join us for a thrilling journey of robotics as participants craft their ingenious robots from scratch. Participants will design, build, and run small 4-wheeled robots on a plywood track filled with obstacles, showcasing their bots' agility, speed, and problem-solving skills. Witness the fusion of innovation and competition as these mechanical marvels sprint towards victory. Whether you're a novice or a seasoned roboticist, this event promises a high-octane blend of learning and excitement that will leave you on the edge of your seat.

- **Number of Rounds: 3**

- **Rules:**

1. Teams of **1-3 participants** are allowed.
2. The event consists of three rounds, one on each day of the fest.
3. Each round will have more difficult obstacles than the one previous.
4. Up to 10 teams can participate in the first round. 6 will progress to the second and 3 to the final.
5. Each team will design a single bot. The same bot must be used for all rounds; no modifications are allowed after the time limit for construction.
6. Bots must be constructed within the specified time. No time extensions will be provided.
7. The bots should be constructed entirely using the raw materials provided by Kraftwagen. Any additions, changes, or modifications must be made with the approval of the event organizers. Bots that have unapproved modifications will be disqualified.
8. Teams must manufacture their bots themselves. Teams may not get their bots constructed by any external parties.

- **Judging Criteria:**

1. The bots will be evaluated based on points won and time taken.
2. Points are won for each obstacle successfully crossed.

3. Each round, teams are allowed a certain number of respawns if their bot goes out of play. They will respawn at the last checkpoint crossed.
4. Once a team exhausts all respawns, the points are recorded and the team's run for that round is ended.
5. Every time a bot goes out of play, points are deducted.
6. A bot is out of play if:
 - a. It falls off the track.
 - b. Gets irreversibly stuck in an obstacle.
 - c. All four wheels leave the track.
 - d. Teams request it.
7. Bots will be timed for the entire duration that they are in play.
8. At the end of each round, bots will be ranked based on points scored.
9. In the event of a tie, the bot that was in play for less time will be ranked higher.

VEDANTH

VEDANTH 13.0

- **Event Description:**

Vedanth is a technical exhibition at Manipal Institute of Technology's technical fest, Tech Tatva. It serves as a platform for innovators across esteemed institutions to showcase their skills in the fields of IoT, machine learning, medical innovation, robotics and automation, technology for social betterment, innovative learning, and frugal innovation. The competition will have both hardware and software models presented.

- **Number of Rounds: 2**

- **Rules:**

1. Students participating in the competition must be undergraduate students (any discipline is allowed) in teams of **3-6 participants**.
2. The judge's decision will be final.
3. It is strictly asked that the team does not stray away from the Idea that they've submitted.
4. A working prototype is mandatory.
5. In case of a tie for a particular position, the team that has the most audience poles will come out on top.
6. If the team that has received the highest audience pole has already won a prize, then the audience's favorite prize will be passed on to the team next in line.

- 1. Round 1:**

- a. The Organizers will go through the ideas submitted.
- b. The teams with ideas that have the best synergy with the event will be shortlisted.
- c. This will be held in September so that the teams will get an ample amount of time to make their travel plans.

2. Round 2:

- a. Will be held offline on the dates of Tech Tatva 23 in Manipal Institute of Technology.
- b. Teams will have to showcase their products throughout the 3 days.
- c. To judge the products 3 judges are appointed and the judging criteria are mentioned below.

● Judging Criteria:

Priority will be given to the Most innovative projects. The project must be Innovative on the following grounds:

1. Project concept – 10 Marks
2. Objective of the Project – 10 Marks
3. Project Design and Construction – 10 Marks
4. Compatibility – 10 Marks
5. Implementation and feasibility in the market – 15 Marks
6. Development Scope – 10 Marks
7. Scope of innovation, creativity & uniqueness – 15 Marks
8. User Experience – 10 Marks

ROBOWARS

- **Event Description:**

Celebrating the art of Robotic Combat through a competition where participants construct and operate combat machines. The objective is to create and maneuver a combat robot capable of engaging in secure and regulated battles against opponents, showcasing its prowess in engineering, innovation, and piloting expertise.

[Click Here To View Rulebook](#)



REGULAR EVENTS

ACUMEN

TESSERACT

- **Event Description:**

Are you ready for the ultimate test of wit, teamwork, and determination? Join us for an adrenaline-pumping adventure as we present "Tesseract" – a thrilling three-round game that will push your limits, test your knowledge, and ignite your competitive spirit!

- **Number of Rounds: 3**

- **Rules:**

- 1. Round 1: (The Mind-Bending Quiz)**

- a. Teams of **2-4 participants** are to gather at the challenge arena for a quiz.
- b. Quizmasters ask questions from different categories, and correct answers earn points.
- c. Be mindful of the time, as only the top teams advance.
- d. Early finishers gain an advantage in subsequent rounds.

- 2. Round 2: (The Enigmatic Treasure Hunt)**

- a. Teams that pass the quiz will embark on this adventure armed with clues, maps, and riddles.
- b. Your mission: explore our campus, discover hidden treasures, and complete challenging tasks.
- c. Success depends on speed, teamwork, and problem-solving as you race against the clock to secure your spot in the showdown.

- **Event Description:**

Are you drawn to the allure of an Auction, or do you crave the exhilarating pulse of Jeopardy-style trivia? Look no more, for we have the ultimate fusion tailored just for you. AIB presents an electrifying medley of buzzer rounds, Jeopardy trivia, and auction, seamlessly intertwined across three gripping rounds. Put your wits and digital savviness to the test, and as a delightful extra, seize the chance to claim enticing prizes.

- **Number of Rounds: 3**

- **Rules:**

1. Team sizes of **2-3 participants** are allowed.
2. The medium of Questions would be English.
3. All the team members should be present at the venue throughout the conduction of the competition.
4. The Usage of Mobile phones is not allowed in the competition and will lead to the disqualification of the teams from the event.
5. Always maintain discipline.
6. The winner will be announced based on performance during the auction.
7. The decision of CCs is final.
8. Teams found cheating through any means will be disqualified.
9. Any kind of misbehavior will result in disqualification of the respective team.
10. Any collaboration between teams will lead to instant disqualification.

1. Round 1: The Mind-Bending Quiz!

- a. Teams answer questions from different categories.
- b. The team with a correct answer selects the next category.
- c. Continues until all teams go through each category once.
- d. 32 teams, 2 sessions, 16 teams each.
- e. Each session: 25 questions, 1 hour 15 minutes, 15-minute break.
- f. 16/32 teams advance to the Jeopardy round.

2. Round 2: Jeopardy: It's not just about what you know, but how you strategize!

- a. Two sub-rounds with 3 questions per team.
- b. If a team answers incorrectly, the next team gets the question.
- c. In the event of a wrong answer, the team's responses will be frozen for that round.
- d. Each team can answer a maximum of three questions.

3. Round 3: Auction: Adapt, bid wisely, and be ready to negotiate!

- a. Auction of survival kit items, including protection gear, medical, tech equipment, and food supplies.
- b. 6 teams participate, each given a unique survival scenario.
- c. Points are awarded based on scenario priorities, undisclosed to teams.
- d. Scenarios are randomly allotted.

AEROVERSE

ICARUS

- **Event Description:**

Challenge your engineering and piloting skills by participating in the task of designing and constructing an on-the-spot glider within the time constraints, utilizing the materials provided. This offline event is designed to be highly competitive, putting your abilities to the test. The climax of this challenge arrives when one of your team members hand-launches the glider, putting your creation to the ultimate test.

- **Number of Rounds: 2**

- **Rules:**

1. Team sizes of **1-3 participants** are allowed.
2. All Teams must adhere to the dimensions and limits specified in the rounds.
3. Teams must only use the materials provided and not use any additional materials.
4. The participants will be given 3 hours to build their gliders; during this time, they can also test the gliders.
5. Any modifications after the 3-hour duration will result in penalization. (10% of the final score will be deducted).
6. Additional points will be awarded to teams that can accommodate a payload (Apsara eraser) in their glider. The payload must not detach itself from the glider during any point of flight.
7. Each team will be given 3 attempts to fly their glider.
8. The best of the 3 attempts will be evaluated.
9. The jury's decision is final and binding.

- **Judging criteria:**

$$\text{Score} = \left(\frac{1.5}{X} \right) + 0.3 \times Y + 0.1 \times Z + 0.2 \times P$$

X – Proximity to the Target (meters)

Y – Glide Time (seconds)

Z – Judge's score (Design merit, Stability of flight, Quantity of materials etc)
(Scored out of 10)

P – Payload (2 points for every eraser)



ALACRITY

FOXHUNT: RACE TO FIND WATER ON MOON

- **Event Description:**

Calling all students, from coding enthusiasts to newcomers, for an electrifying event that guarantees not only fun but also valuable learning experiences, all while offering the chance to win incredible prizes!

In this exciting competition, participants will have the opportunity to design their own receiver and transmitter antenna circuits. Armed with these, they will embark on a journey across the campus in pursuit of hidden transmitting antennas. To aid them on this adventure, participants will receive a series of carefully crafted clues.

- **Number of Rounds: 2**

- **Rules:**

- 1. Round 1:**

- a. Team size of **2-3 participants is allowed.**
- b. The teams will be shown a video on antennas. Later, each team will battle in a Quiz.
- c. Questions will be asked of each group. Questions will be displayed on the screen and the first team will get a chance to answer the question. If they fail to do so the question will be passed onto the next team with some reduction in marks and time to answer.
- d. An introduction to the final round will be given where participants will have to find a crater named Shackleton Crater.
- e. For each point earned by the team in this round, it gets a step closer to finding water on the moon.
- f. This round mainly involves the construction and working of the Transmitter and Receiver circuit.
- g. The work will be demonstrated and participants are expected to rig up the receiver circuit with brief knowledge about the transmitter circuit.

- h. The teams will be guided by the event organizers while making the circuit. The required materials will be provided to them.
- i. The top 15 teams will move on to the next stage after the quiz. No elimination for the circuit rigging competition unless the team fails to rig up the circuit in time.
- j. In case of a draw, there will be an extra set of questions for the tied teams.

2. Round 2:

- a. The teams set out for the quest of Shackleton Crater where the first team to find the crater wins.
- b. Using the receiver circuit, the participants rigged up in the first round will have to search for the crater (which radiates/ transmits signals).
- c. The team having the most points at the end wins.

● Judging Criteria:

1. Round 1

- a. Score of the quiz.
- b. Time taken by the participants to rig the circuits.

2. Round 2

- a. The judging criteria will be based on the time taken to discover the crater.
- b. If any of the team members are caught cheating either by disclosing or by hinting with signals, both the teams involved will be disqualified.

ARCUS

SUSTAIN-A-BUILD

- **Event Description:**

The event is conducted in an offline setting and aims to evaluate an individual's aptitude in the realms of Real Estate Management, Budget Analysis, and Urban Planning. Participants will engage in activities where they will acquire properties, engage in city design, and demonstrate proficiency in articulating their planning strategies. This hands-on experience challenges individuals to navigate the complexities of real estate, make strategic investments, and allocate resources judiciously to foster sustainable growth and prosperity within their envisioned urban landscape.

- **Number of Rounds: 3**

- **Rules:**

- 1. Round 1:**

- Teams can have **2-4 participants**.
- Time duration:
 - Round 1: 30 minutes
 - Round 2: 90 minutes
 - Round 3: 30 minutes
- Each team will be given 30 questions.
- For every correct answer, the team will be awarded 100 crore currency units.
- The questions will be focused on Mental ability and Aptitude.

- 2. Round 2:**

- Teams will be given a choice of 3 locations (one near the sea, one near the mountains, one in the planes).
- Now the teams will have to create a commercial service, with the money they had won in the first round.

- c. The team will have to make sure that their projects will not harm the environment and follow sustainable building practices, also while making sure that their service reaches profitability within 10 years of completion of construction.

3. Round 3:

- a. The team members will have to give a detailed explanation of their city planning including the cost of building and materials, the energy-saving methodology they have implemented in their buildings the sustainable materials and practices used in the structure, and how they predict the service to be profitable.
- b. Once the team finishes their presentation the panel of judges will cross-question them on the information provided by the team and will score them accordingly.

● Judging Criteria:

1. For every corresponding round, points will be awarded to each team, and the team that will have the maximum number of points in the end wins.
2. The ranking of the teams will be based on all the points they have in the end.

QUANDARY

- **Event Description:**

Quandary is bespoke for those who think promptly and bring out-of-the-box directives for challenging problems. The participants will be bombarded with problem statements based on the nature of their committee and they're expected to defend, debate, and think of solutions for the same. Participants will also have to come up with a strategic marketing campaign for the said product or service. The nature of the committee will be based on the corporate world and various economic sectors. The participants are expected to act like business owners and defend their allotted company in a situation of emergency.

- **Rules:**

1. Team sizes of **1-4 participants** are allowed.
2. Participants must agree to adhere to the stipulated Rules of Procedure of the event.
3. All participants are requested to be on time without delay in the competition proceedings.
4. One speaker can speak at the time of delivery of arguments.
5. All final verdicts lie with the Judges and will be binding in their delivery.
6. The portfolio that the company allotted is final and cannot be changed on request.
7. Any act of contempt against the Judges or organizers may result in negative marking and/or disqualification of the individual.
8. The speakers must maintain the decorum of a formal event. Any sort of hate speech or personal attack shall not go unaddressed.
9. A detailed schedule will be issued shortly.
10. Participants are expected to be punctual in their allotted slot. No delay requests will be entertained.
11. It is advised to carry your own devices for research.
12. Participants can participate either as a team or individually.

- **Judging Criteria:**

- 1. **Content**

- a. The quality of the research will be assessed.
 - b. The participating teams will be evaluated based on their unique perspectives and the way they present them.
 - c. Business knowledge.

- 2. **Problem Solving**

- a. Assessing the crises and forming innovative solutions.

- 3. **Vocal Delivery**

- a. Speech Clarity/Diction and Pronunciation.
 - b. Model investment event.
 - c. Knowledgeable and fruitful investment.

MONOPOLY

- **Event Description:**

A trading-based competition where teams will represent companies and organizations with certain assets and set objectives. A problem statement shall be provided where the teams will have to create strategies and form alliances with other teams to achieve their goals. The team or alliance that achieves their objectives and ends up with the best deal wins.

- **Number of Rounds: 2**

- **Rules:**

- 1. Team sizes of **1-4 participants** are allowed.
 - 2. Participants must agree to adhere to the stipulated Rules of Procedure of the event.
 - 3. All participants are requested to be on time without delay in the competition proceedings.
 - 4. One speaker can speak from each team/alliance at the time of delivery of arguments.
 - 5. All final verdicts lie with the Judges and will be binding in their delivery.
 - 6. The assets provided to the team i.e., the company & assets allotted are final and cannot be changed on request.

7. Any act of contempt against the Judges or organizers may result in negative marking and/or disqualification of the individual.
8. The speakers must maintain the decorum of a formal event. Any sort of hate speech or personal attack shall not go unaddressed.
9. A detailed schedule will be issued shortly.
10. Participants are expected to be punctual in their allotted slot. No delay requests will be entertained.

● **Judging Criteria:**

1. Content

- a. Creative and collaborative ideas shall be awarded max points.
- b. Business knowledge.
- c. The participating teams will be evaluated based on their unique perspectives and the way they present them.

2. Problem Solving

- a. Assessing the problem statement and forming alliances to come up with creative solutions.

3. Vocal Delivery

- a. Speech Clarity/Diction and Pronunciation.
- b. The flow of the event.
- c. Knowledge about the field.

4. Ethics

- a. Poaching of ideas/purposefully harming intellectual property of other teams is strictly prohibited.

CODE RED

CODEFUSION

- **Event Description:**

An online coding challenge structured in ICPC fashion but with a twist, where teams of three members collaborate to find innovative solutions to real-world problems. This competition promotes teamwork, creativity, innovation, and the ability to thrive in high-pressure situations. Participating in this event offers a unique opportunity to confront the challenges usually posed by prominent product-based and high-frequency trading companies during their hiring processes. By tackling these problems, you can assess your expertise and better prepare for future interviews and career prospects.

- **Number of Rounds: 3**

- **Rules:**

1. Teams must have **3 participants**.
2. Only 1 username should be used for all the team's submissions.
3. The same username can be signed into from different computers simultaneously and submissions can be made simultaneously.
4. In case of submissions from the team member whose ID/username differs from the one registered, their submissions will not be considered.

1. Round 1:

- a. This is an online round based on Competitive Programming.
- b. 50% percent of the total number of teams will be eliminated in this round.
- c. The teams with more points will be placed higher.

2. Round 2:

- a. One team member will possess the keyboard while another controls the display.
- b. Two members will work on the coding problems. Meanwhile, the third person will participate in the Bonus Round (Analytical+Conceptual).

3. Round 3:

- a. 50% of the teams in the second round will be allowed to participate in the third and final round.
- b. This is also a Competitive Programming round where two members will work on the problem at a time and these members will rotate every 20 minutes.
- c. Two members will work on the coding problems. Meanwhile, the third person will participate in the Bonus Round (Analytical+Conceptual)

● Judging Criteria:

1. Round 1:

- a. There is no partial marking. Different questions will have different amounts of points associated with them. If all the test cases pass, you will only get marks for a question.
- b. There will be a penalty of 5 minutes for each wrong submission. There is no time penalty for a compilation error. If multiple teams have equal points, the teams with less combined penalty and total time will be placed higher.

2. Round 2 and 3:

- a. Each challenge has a pre-determined score.
- b. A participant's score depends on how many test cases a participant's code submission successfully passes.
- c. If a participant submits more than one solution per challenge, then the participant's score will reflect the highest score achieved. The participant's score will reflect the last code submission in a game challenge.
- d. Participants are ranked by score. If two or more participants achieve the same score, then the tie is broken by the total time taken to submit the last solution, resulting in a higher score.

COSMICCON

ASTROPHOTOGRAPHY AND POSTER MAKING

- **Event Description:**

An astrophotography and poster-making competition where participants must capture images of the night sky and using their samples make an innovative and informative poster. Delve into the wonders of space and astronomy as we take you on a cosmic adventure that's out of this world.

- **Number of Rounds: 2**

- **Rules:**

1. Teams of **1-3 participants** are allowed.
2. Emphasize that all posters must be original creations of the entrants.
3. Prohibit the use of copyrighted or plagiarized content and use of AI.
4. Pre-processed data will go through verification.
5. Submission Criteria:
 - a. Size and Layout: A4/square.
 - b. Specify the dimensions and layout requirements for posters, if applicable.
 - c. Specify all the elements used in the design.
 - d. Encourage participants to include visual and textual elements that effectively convey their message.
 - e. Mention any specific design elements that must be included (e.g., event logo, competition name).

- **Judging criteria:**

1. Judges - CCs.
2. Point System- A panel of expert judges will evaluate all entries based on the following criteria:
 - a. Creativity and Artistic Expression
 - b. Technical Skill
 - c. Overall Visual Appeal
 - d. Relevance to Astronomy and Space Exploration

ESCAPE ROOM

- **Event Description:**

This is an engaging and immersive escape room-based event where the participating teams are tasked with navigating a multi-floor building. The teams, armed with their wits and collaborative spirit, will find themselves confronted with an array of intricately designed scenarios on each floor. They have to clear each floor's puzzle using their keen observation skills and problem-solving abilities to reach the final floor and escape.

- **Rules:**

1. **Round 1: (Quiz)**

- a. **Team Formation:**

- i. Teams of **1-3 participants** are allowed.
- ii. Team members should choose a team name.

- b. **Quiz Format:**

- i. The quiz will have questions related to astronomy, space exploration, cosmic phenomena, and space pop culture.
- ii. Each team will have an hour to answer as many questions as possible.
- iii. Each correct answer earns the team marks, and incorrect answers do not result in negative marks.

- c. **Quiz Materials:**

- i. Each team will be provided with a pen and answer sheets.
- ii. All answers must be recorded on the provided answer sheets.

- d. **Quiz Moderation:**

- i. Quiz moderators will be present to distribute and collect answer sheets.
- ii. Teams are required to maintain a quiet and respectful atmosphere during the quiz.
- iii. Any team/individual found using their gadgets (smartphone, smartwatches, etc.) will be disqualified on the spot.
- iv. Cheating is strictly prohibited.

2. **Round 2: (Escape Room Challenge)**

a. Briefing:

- i. The escape room challenge is set on a space station (AB5) stranded in deep space.
- ii. Teams will have 5 hours to complete the mission and escape.
- iii. Teams with the bonus advantage from the quiz will receive a clue to assist them.

b. Objectives:

- i. Teams must solve a series of puzzles and challenges to progress.
- ii. The goal is to clear every level to escape the building.

c. Rules and Guidelines:

- i. Team members must work together, communicate effectively, and use their problem-solving skills.
- ii. Teams may request up to 3 hints from the game master during the challenge.
- iii. Teams who abandon the challenge will be eliminated.
- iv. Teams found collaborating will be eliminated.

d. General Rules:

- i. Respect the game master's instructions and decisions.
- ii. Safety is a top priority. Do not attempt to force open doors or windows.
- iii. Any form of cheating or unsportsmanlike conduct will result in immediate disqualification.
- iv. Teams are responsible for any damage caused to the escape room during the challenge.

● Judging Criteria:

1. Round 1:

- a. Teams will receive 1 mark for each correct answer.
- b. The team with the highest score at the end of the quiz will receive a bonus advantage in the escape room challenge.
- c. In case of a tie in the scores of the quiz, there are inbuilt tie breakers and time of submission will be taken into consideration.
- d. In case of an absolute tie, multiple teams are eligible for the bonus advantage previously mentioned.

2. Round 2:

- a. The first 3 teams that successfully escape the space station in the shortest amount of time will be declared the winner.
- b. In case no team manages to escape within the x-minute time limit, the team that progressed the furthest will be declared the winner.



EPSILON

MEDTECH MAYHEM: QUIZ AND DEBATE

- **Event Description:**

MedTech Mayhem is a team-based event centered around the various biomedical engineering domains, that requires both knowledge and debating skills, so choose your teammates wisely and sign up for the chance to prove yourself.

- **Number of Rounds: 3**

- **Rules:**

1. Round 1: (Elimination and Quarter Finals)

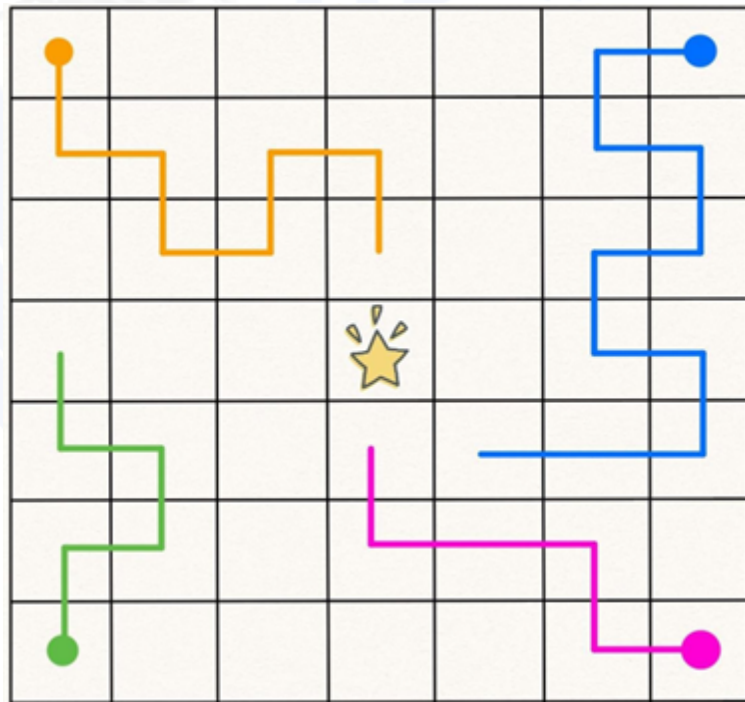
a. Elimination:

- All rounds will be team-based (**3 to 4 participants**).
- Participants will be handed out blank sheets on which they will write the answers to the questions asked by the quizmaster.
- Twenty questions will be asked over 15 minutes, and the top 8 teams will qualify for the quarterfinals.
- Question types: MCQs and Fill in the blanks.
- Participants will only be given 15 minutes to answer the questions.
- Latecomers won't be given extra time.
- No negative points will be deducted in this round.
- At the most, only one cancellation is allowed on paper.
- Getting help from electronic devices or other participating teams will result in disqualification.

b. Quarter Finals:

- This round will commence immediately after eliminations. The top 8 teams will compete over two-quarter finals where four teams will start on four corners of a 9x9 square containing tiles with questions of varying difficulty levels.
- The game aims to reach 50% of the total possible points. Each team will start on each of the edges and can only select adjacent tiles.
- Each tile will have a predetermined number of points and question types associated with it, depending on its position on the grid.

- iv. The tiles on the edge of the grid will have more points than those towards the center of the grid.
- v. However, the central tile will be marked as a star tile, beginning with 100 points, with Y points deducted every time any team gets a question correct.
- vi. When the first team reaches 50% points, the round will end, and the team having the second highest number of points will be placed second. The top two teams will qualify for the semi-final round.
- vii. Question types: MCQs, MAMCQs, Identify the picture, Paragraph questions, Rapid-fire questions.
- viii. Participants will not be allowed to get help from ANY external sources (electronic devices/other teams/audience).
- ix. Pouncing & bouncing will be allowed; however, this round will also lack negative points for incorrect answers.
- x. An incorrectly answered tile will refresh with a different question of the same type. However, the tile will be greyed out if it is answered incorrectly a second time.



2. Round 2: (Semi-Finals)

- a. In the semi-final round, the top two teams from the previous two quarter-final rounds will compete in two semi-final rounds. The four teams will quiz their way through a game of tic-tac-toe.
- b. A 3x3 grid with categories will be displayed on the screen. Teams can select the tile based on their preferred category and strategic positioning to get their line. .
- c. If a team gets a correct answer, they will be awarded their selected tile and 10 points.
- d. Should they get it wrong, 5 points will be cut.
- e. All tiles will have a cooldown period of 5 minutes, after which a team can challenge the other team's previously selected tile to complete their line.
- f. If the grid is marked in such a way that no team can form a line, the winner will be decided based on the number of points awarded.
- g. Participants will not be allowed to get help from ANY external sources (electronic devices/other teams/audience).
- h. Pouncing & bouncing will be allowed; however, this round will have negative points for incorrect answers (+10, -5).
- i. An incorrectly answered tile will refresh with a different question of the same type. However, the tile will be grayed out if it is answered incorrectly a second time.
- j. Cooldown period = 5 minutes.



CATEGORY 1	CATEGORY 2	CATEGORY 3
CATEGORY 4	CATEGORY 5	CATEGORY 6
CATEGORY 7	CATEGORY 8	CATEGORY 9

3. Round 3: (Debate)

- a. All the teams that qualify for the semi-final round will play in this round. The winners of the semi-final rounds will play for the 1st & 2nd positions, while the runners-up of the semi-finals will compete for the 3rd position.
- b. Teams will be given a MedTech-based problem statement, for which they will have to devise a solution and present it to the three judges and the opposing team.
- c. The two teams will then debate to justify why their approach is superior. Teams will be judged for both their technical and presentation skills and their skills as debaters in this round.
- d. Profanity or derogatory language will not be allowed under any circumstances during the debate.
- e. Any attempts to personally demean other team members will lead to immediate disqualification.
- f. The team will only be given a maximum of ten minutes once the problem statement is announced to use their devices to gather necessary information that they can use. The use of electronic media or obtaining help from audience members will also lead to immediate disqualification.

● **Judging Criteria:**

1. Elimination:

20 questions will be asked over 15 minutes, and the top 8 teams will qualify for the quarterfinals. The estimated duration is 30 minutes.

2. Quarterfinals:

- a. The game aims to reach 50% of the total possible points. Each team will start on each of the edges and can only select adjacent tiles. Each tile will have a predetermined number of points and question types associated with it, depending on its position on the grid.
- b. The tiles on the edge of the grid will have more points than those towards the center of the grid. However, the central tile will be marked as a star tile, beginning with 100 points, with Y points deducted every time any team gets a question correct.
- c. When the first team reaches 50% points, the round will end, and the team having the second highest number of points will place second. The top two teams will qualify for the semi-final round.

3. Semi-final round:

- a. If a team gets a correct answer, they will be awarded their selected tile and 10 points. Should they get it wrong, 5 points will be cut. All tiles will have a cooldown period of 5 minutes, after which a team can challenge the other team's previously selected tile to complete their line.
- b. If the grid is marked so that no team can form a line, the winner will be decided based on the number of points awarded.

4. Debate round:

The two teams will debate on a MedTech-based problem statement and justify their superior approach. Teams will be judged for both their technical and presentation skills and their skills as debaters in this round.

ESCAPE VELOCITY

ORK WORKSHOP & VIRTUAL ROCKET BUILDING COMPETITION

- **Event Description:**

The focus of the event is centered on utilizing the open-source software named Open Rocket, enabling participants to construct their model rockets from the ground up and subsequently simulate their behavior. The event emphasizes comprehending the mechanical aspects integral to model rocket construction. This competition allows participants to construct their inaugural virtual rocket within the software and subsequently virtually launch and navigate its flight.

- **Number of Rounds: 1**

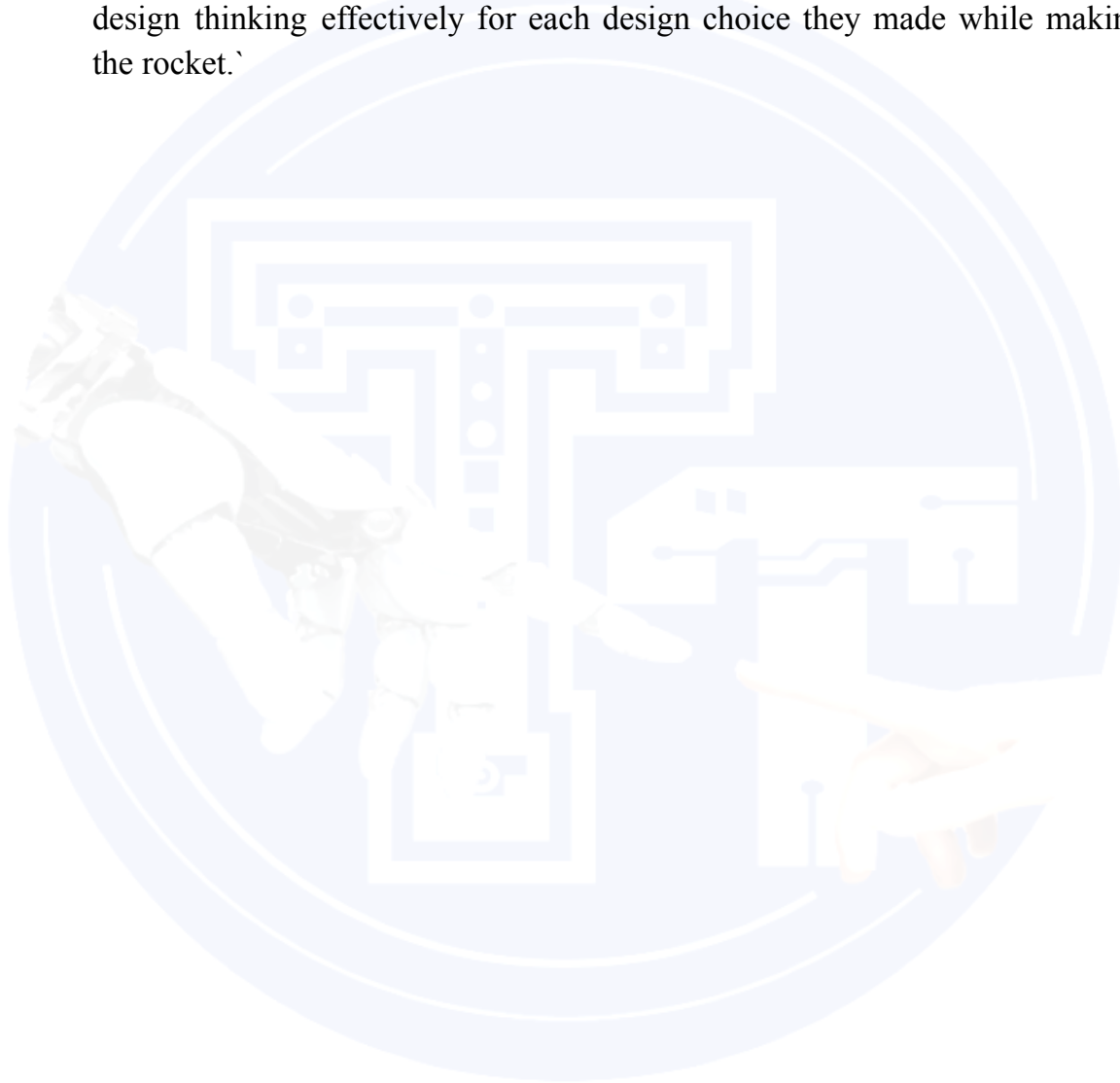
- **Rules:**

1. Participants can form a **team of 2 or** participate **individually**.
2. It is mandatory to attend the workshop to participate in the event.
3. Certain parameters and targets such as apogee will be given to the participants before the start of the competition and they will have to design the rocket to meet those conditions.
4. The participants are not allowed to copy the rocket taught during the workshop and submit it for the competition. Plagiarism will lead to disqualification.
5. Participants must submit the ORK file along with a detailed report within the stipulated time.
6. Participants are encouraged to bring their laptops to the event.
7. The participants are not allowed to copy the rocket taught during the workshop and submit it for the competition. Plagiarism will lead to disqualification.

- **Judging Criteria:**

1. Scoring will be divided into two parts: The overall design of the rocket and the flight performance from simulations.

2. Points for designing will be given based on how well the participants have made their rockets according to the design criteria given to them.
3. Points for the flight will be given based on flight parameters such as the target apogee, launch rod velocity, ground hit velocity, etc.
4. Bonus points will be given to certain participants if they can justify their design thinking effectively for each design choice they made while making the rocket.'



FOSSIFY

OPEN-SOURCE CRYPTIC HUNT

- **Event Description:**

Cryptic Hunt is envisioned as an open-source treasure hunt game in which players must understand clues to proceed to higher levels. The hints will be based on open-source projects, tools, and programs utilized in the technological field. The hunt is planned in such a manner that it will take place exclusively on GitHub, with participants getting to discover and navigate through the best aspects of the platform to win the game. The program is intended to be a pleasant introduction to the world of open source, with participants learning A-Z aspects of version systems from basic to intermediate levels. Readme files, basic codes, etc. will make this event an extremely unique learning opportunity.

- **Number of Rounds: 2**

- **Rules:**

1. Participation for all the rounds is **individual**.
2. Basic knowledge of browsing through GitHub and the web is needed; no specific technical knowledge is expected.
3. Hunting is divided into 2 rounds. People from the first round will be shortlisted for the second (final) round.
4. Any inter-collaboration between any individual during any of the rounds is not permitted and will result in disqualification from the competition.
5. All Decisions of the organizers are final.

- **Judging Criteria:**

1. The cryptic hunt is a timed competition where participants must solve puzzles and uncover clues within a set time frame.
2. Participants earn points based on the shorter duration of when they successfully uncover each clue.
3. The faster they solve a puzzle or find a clue, the more points they earn.
4. Participants with the highest accumulated points will be declared the winners.
5. Event specifics, such as whether it's a team or solo event and the duration, may be adapted to align with Tech Tatva's timeline and requirements.

MECHANIZE

INNOFRAME

- **Event Description:**

INNOFRAME is a thrilling competition that invites talented designers and engineers to revolutionize the world of roll cage and chassis design. This extraordinary event combines the virtual realm of CAD software with the practicality of real-life fabrication, challenging participants to create cutting-edge models that excel in driver safety, ergonomics, weight optimization, and design aesthetics.

- **Number of Rounds: 2**

- **Rules:**

1. Round 1 (could be done **individually**): Participants will be required to design their rollcage on a CAD software of their choice along with a brief presentation to explain their design and material choices.
2. Round 2 (requires a **team of 2-3**): The CAD design will be fabricated using PVC pipes.
3. Rules and specifications to be met while designing the rollcage will be provided on the day of the event.
4. Usage of the internet will lead to instant disqualification.
5. Defaming and disobeying the judges and organizers.

- **Judging Criteria:**

1. Driver Safety and Ergonomics.
2. Weight of Rollcage.
3. Design Aesthetics.
4. Similarity between the CAD model and the roll cage fabricated.

MECHATRON

CHAKRAVYUH

- **Event Description:**

Join us on a thrilling two-day journey inspired by the ancient Chakravyuh tactics from the Mahabharata. Dive into a world of intellectual conquests, where your abilities will be challenged through diverse, fun, and strategically demanding challenges. These challenges are designed to engage and test your cognitive prowess, igniting your creativity. Your advancement depends solely on your problem-solving skills. Join us for this exciting adventure where intellect and strategy are your keys to success!

- **Number of Rounds: 2**

- **Rules:**

- 1. Round 1:**

- Team sizes of **1-3 participants** are allowed.
- Round 1 is structured into 6 sets, with the number of sets being determined based on the total number of participating teams.
- After each set, teams will be eliminated progressively. The number of teams remaining after each set is as follows:
 - After 6 sets: 30 teams will proceed.
 - After 5 sets: 20 teams will continue.
 - After 4 sets: 16 teams will remain.
 - After 3 sets: 12 teams will advance.
 - After 2 sets: 10 teams will survive.
 - After 1 set: 8 teams will go to Round 2.
- The first set will consist of 10 questions, each worth 1 mark. The following 5 sets will have 5 questions each, with varying marks for each question (1, 2, 3, 4, and 5 marks).
- Participants are not allowed to use any external resources during this round, including electronic devices and the Internet.

- f. In the event of a tie between two or more teams with the same score, the team that submitted their answers in the shortest amount of time will be given precedence.
- g. In the 1-5 sets, there will be negative marking for the last 2 questions in each of these sets (the 4-mark and 5-mark questions) will have a negative marking of 2 marks for each incorrect answer.
- h. No External Resources: Participants should not be allowed to use any external resources, including electronic devices and the internet, during the round.

2. Round 2:

- a. Round 2, held on Day 2, is a crucial part of the competition, where the top teams from Round 1 will face off for the ultimate victory.
- b. Before Round 2 begins, teams will undergo verification and receive their unique team codes. These codes are essential for accessing the quiz.
- c. Participants are kindly requested to arrive at the venue 30 minutes before the event's scheduled start time to facilitate a smooth verification process and ensure that no important instructions are missed.
- d. The quiz file link for Round 2 will be provided at the scheduled start time in a designated WhatsApp group.
- e. For ease of organization and tracking, participants are strongly advised to extract the archives each time they unlock a level and keep a record of all their answers.
- f. Participants are strictly prohibited from sharing answers or engaging in any form of communication during the event. Any violation of this rule will result in immediate disqualification, and any prizes won for that level will be forfeited.
- g. In case of any questions or uncertainties about the answers, participants should promptly contact the event volunteers present in their respective rooms.
- h. The organizers will not be held responsible for any internet connectivity issues caused by participants, so it's crucial to ensure a stable internet connection.
- i. The exact timestamp and Team ID of the teams will be noted after they complete the quiz.

- j. Throughout the event, participants are expected to maintain a high level of decorum and sportsmanship. Any form of misconduct, the use of vulgar language, or defamatory statements will result in immediate disqualification and removal from the event.
- k. All decisions made by the event organizers shall be considered final, with fairness and integrity being paramount.

- **Judging Criteria:**

1. **Round 1 (Day 1):** The top eight teams surviving will be selected for round 2.
2. **Round 2 (Day 2):** The winner will be decided by whoever figures out all the clues (passwords) and can unzip all the zip folders. There will be one winner and two runner-ups, which will be decided on the time factor.

KICK OFF

- **Event Description:**

Immerse yourself in the future of football with our thrilling Miniature Bot Football Matches! Command your pint-sized football bot using the convenience of your phone and Bluetooth technology. Experience the excitement as you skillfully maneuver your bot to score spectacular goals while fiercely defending your goal post from the relentless attacks of your opponents. Get ready to unleash your strategic prowess and reflexes in this action-packed, pocket-sized soccer showdown.

- **Number of Rounds:**

In case we get an even number of players in the Finals we'll go with the knockout system till we get our top three players.

If there are an odd number of players in the finals, then there would be knockout rounds till and including the semifinals and then a Round Robin between the finalists. The top 3 players after the finals will be decided based on the matches, they win in the Round Robin Finals.

- **Rules:**

1. To score a point, the ball should enter the goalpost.
2. No participant is allowed to touch the ball, board, or robot during the match.
3. If the robot goes outside the end lines, the referee will set it up again at the goal line.
4. The game consists of two halves of 2 minutes each.
5. Switch sides after halftime.
6. If at the end of the time the number of goals is the same, then extra time of 1 minute is awarded till the tie is broken.
7. Players would have to control the bots using their phones only.
8. Any damage to the parts of the robot, a fine will be levied according to the cost of the damaged pieces.
9. The winner of each round will compete and so on till the finals.
10. Bring a Bluetooth-enabled phone.

- **Judging Criteria:**

Maximum number of Goals scored by the players.

MIT-GPT

CIPHER

- **Event Description:**

Cipher is an intensive 24-hour Data Science Hackathon where participants will have to showcase their analytics and Machine Learning expertise. The individual will be given an opportunity to demonstrate their proficiency in data handling and exhibit their analytical skills in an intense and competitive environment.

- **Number of Rounds: 1**

- **Rules:**

1. **Individual** participation.
2. Sharing of any findings in the dataset, including but not limited to Exploratory Data Analysis, Feature Selection, Algorithms, and Predictions will count towards immediate disqualification.
3. Participants will be required to submit their Python notebooks immediately after submission. These will not directly count towards any score, rather, they are intended for the organizers to ensure that all the work was done by participants independently.
4. Participants are allowed to use the internet but help from any other person is not allowed.
5. Participants may make multiple submissions but choose ONLY 1 of your submissions to count for final evaluation.

- **Judging Criteria:**

The submissions will be evaluated by a metric that will quantify the performance of their predictive model. This metric will be let known once the competition starts.

SYNAPSE

ECHO

- **Event Description:**

Unleash your creative genius and dive into the realm of intelligent conversational agents. Join us in crafting captivating chatbots using cutting-edge technologies. But that's not all – to ensure everyone is familiar with dialogue flow for creating remarkable chatbots, we're thrilled to announce an accompanying workshop. Ignite your imagination, breathe life into your creation, and embark on a journey of innovation, learning, and prizes. Step into the future where AI meets human-like interactions. Join ECHO for an experience that resonates with excellence.

- **Number of Rounds: 2**

- **Rules:**

1. Teams of **2-3 members** will be provided with a theme for making their chat-bots.
2. Teams must submit a demo video and a presentation for their bots.
3. Any model can be used to train the chatbot, and if the team is unfamiliar with the models, they can use Dialogue Flow.

- **Judging Criteria:**

1. Versatility
2. Response time
3. Lack of error
4. Usability
5. Learnability

CONTACT US

Vinamra Choudhary:

Convener and Technical Secretary

techsec.scmit@manipal.edu

Manaswi Jadhav:

Convener and Technical Secretary

techsec.scmit@manipal.edu

Outstation Management:

Namisha Patrikar:

+91 9108133205

Shavarni Srivastava:

+91 9935487754

Shivanshu:

+91 7529862496

For any queries, kindly write us at: outstation.techtatva@manipal.edu

OUR SOCIALS:

