Rules and Regulations:

Following guidelines, rules and regulations are to be followed by the   participants:

1. Participant(s) may be a single person / group of persons / company / consortium of companies. Any participant cannot take part in multiple groups. Only a group leader needs to registrar in case of more than one participant.

2. Participants has to do online registration at Mineral Search Hackathon (https://hackathon.gsi.gov.in/) for participating in this Hackathon. There is no Registration fee. All instructions will be available in Mineral Search Hackathon.

3. The competition will be launched in hybrid mode during workshop at GSITI, Hyderabad on 20.06.2024. Participants may attend it physically or virtually through web. In the workshop, all Guidelines, rules, regulations as well as all technical matters will be elaborated.

4. Scope: Scope of the contest is defined by the Problem Statement, Background Information and Deliverables. Contestant(s) may use any technology or resources to provide the solution and it has to be mentioned clearly. GSI in no way will be liable in case of any dispute within the team or with any third party.

5. Time Limit: 60 days' time will be allocated to arrive at the solution. See the Event Timeline. There will be a preliminary screening of the submitted applications. The following criteria will be used for screening: (The PPT with 10-12 Slides of the idea and project application/ process, team composition with specialization for the hackathon should be submitted with all the mandatory details. Screening criteria will include novelty of the hackathon, complexity, clarity and details in the prescribed format, feasibility, practicability, sustainability, the scale of impact, user experience and potential for future work progression). Teams for the hackathon will be shortlisted after this preliminary screening and the list will be notified.

6. At the expiry of allocated time of 60 days, participants should upload the solution in Mineral Search Hackathon. Subsequently, they have to present the solution to the Jury online as per the allocated slot. Based on the submitted solution and presentation, there will be shortlisting of solutions.

7. In case of discrepancies, the final decision shall lie with the organizers.

8. Shortlisted participants will be called in the Final workshop to present their solution in front of the jury and the audience. If not possible, participants may present their solution over web. Three best solutions will be selected and award will be conferred.

9. Mentorship: Participants may seek clarification / interact with the Technical Committee for better understanding of the challenge and dataset. GSI will organize open mentoring sessions with pre-defined time-slots.

10. Data Source: GSI will provide data package, downloaded and compiled from Mineral Search Hackathon, that is to be used for arriving at the solution. Participants may use any additional data, if required, from Mineral Search Hackathon or from outside. However, the source of the data must be declared for cross verification by GSI.

11. Late submissions may result in disqualification

12. Code Ownership: All code developed during the Hackathon should be the original work of the team. Participants cannot use code or assets created by someone else without proper permissions or licenses.

13. Any form of cheating, plagiarism, or unfair practices will result in immediate disqualification.

14. Intellectual Property: The Intellectual Property (IP) of the solution resides with the organizers

15. Code Sharing: Participants are encouraged to share their code and projects with the wider community after the Hackathon. Open sourcing or publishing the code on platforms like Mineral Search Hackathon is appreciated.

16. Code of Conduct: Participants should adhere to a code of conduct that promotes inclusivity, respect, and professionalism. Any form of harassment, discrimination, or inappropriate behavior will not be tolerated.

17. Prizes and Awards: The Hackathon will offer prizes or awards to winning teams based on the judging criteria. The prizes can include cash, mentorship opportunities, incubation or acceleration programs, or other incentives outlined by the organizers.

18. Disputes and Arbitration: In case of any disputes or concerns, the decision of the organizers and judging panel will be final. Any disagreements or issues should be resolved through an arbitration process outlined by the organizers.

19. Liability: The organizers and sponsors of the Hackathon hold no liability for any damages, losses, or injuries incurred during the event. Participants are responsible for their own safety, equipment, and actions.

20. GSI/ Ministry of Mines reserves the right to make changes to the Hackathon rules, format, or prizes at any time. Any modifications will be communicated to the participants in a clear and timely manner.

21. Consent and Media Release: Participants may be required to provide consent for their photographs, videos, or project details to be used by the organizers for promotional or media purposes.

22. There will be no TA/DA for the participants.

23. There will be eight prizes i.e. First, Second, Third and five consolation prizes.

24. Decision of the evaluation panel members based on the performance of the team will be final.

25. **Evaluation Process**:

There will be two stage evaluation process with pre-defined set of qualification criteria as described below:

Stage1: Screening of applications: Based on the information submitted during registration, a preliminary screening will be done. The Concept document and submission of the Declaration document will play a vital role in screening process. Through this process, the list of contestants will be finalized.

Stage 2: Stage 2 evaluation will be initiated after contestants submit their solution in Mineral Search Hackathon. Contestants will be given slot to present their solution to the Jury Board on virtual mode. Through this stage merit list will be finalized. The selected contestants will be declared and invited to the Closing workshop at Hyderabad. In the closing workshop, shortlisted contestants will present their solution and finally the relative ranking will be declared and awards will be handed over.

The following criteria will used during evaluation process:

1) Understanding of scope, Data cleaning, Feature extraction and Documentation (30 marks)

  I. Clarity of thought and innovation in analysis

  II. Cleaning and preparation of data, Use of statistical tools, Extraction of relevant features to create input data layers significant for exploration targeting from geological, geochemical, geophysical, borehole, multi-spectral datasets.

  III. Extraction of different features related to geophysical data sets for depth modelling

  IV. Quality and justification/ significance of extracted features.

2) Data analysis and integration methodology, interpretation and Documentation (30 marks)

  I. Innovative approach applied in Geophysical data processing using developed /relevant codes &/or other available software

  II. Data integration process and its justification.

  III. Creation of codes and models for specific commodities

  IV. Final outputs and Documentation of (30 marks)

  V. The degree of identification of prospective areas not included in the training dataset

  VI. Number of new prospective zones delineated in areas hitherto unexplored/reported and their justification.

  VII. Number of constraint depth models created across newly delineated zones as well as previously reported ones, using ground and aero-geophysical, geological and alteration, borehole data.

  VIII. Process, clarity and justification in the report for deriving the final output.

  IX. Report on error factor and degree of influence of input factors in delineating the prospective areas

3) Presentation and demonstration (10 marks)

4) While evaluating the solutions, points will be credited for

  I. deriving suitable geoscientific normalisation of stream sediment data of NGCM, bedrock chemical data of primary dispersions & for mineral alterations across different ASTER scenes,

II.   adding more data layers for evolving the exploration model extracted from national and international journals,

III.   creation of constrained depth sections across major mineral belts and the shortlisted areas for mineral targeting,

IV.   recommending suitable mineral exploration follow-up activities in the delineated potential areas during the current study.

V.   creation of codes that automates data cleaning, data preparation, normalization, feature extraction and delineation of different alteration minerals from all ASTER scenes