I/122611/2023

CIRCULAR

This is with reference to circular no. J-21/2/2023-e-gov-MOWR dated 23/01/2023 (copy enclosed), inviting fresh critical "Problem Statement" for smart India Hackathon, 2023 from Ministry/Departments which will be used to challenge the student community to develop innovative (yet workable) solutions.

In this regard, the Organizations under CWC are requested to identify and send their problem statements for Smart India Hackathon 2023 by 03/02/2023 positively for onward transmission to Ministry.

(Amitabh Tiwari)
Deputy Director

To,

All Chief Engineers (Through CWC website circular).

309046/2023/SMDTE

No. J-21/2/2023-e-gov-MOWR
Government of India
Ministry of Jal Shakti
Department of Water Resources, RD & GR

Shram Shakti Bhawan,
Rafi Marg, New Delhi
Dated 23rd January 2023

<u>OFFICE MEMORANDUM</u>

Subject: Identifying Problem Statements and Nominating Experts/ Mentors/ Judges for Smart India Hackathon (SIH) 2023 -reg.

The undersigned is directed to refer to the Department of Higher Education's D.O. No. 36-1/2023-TS.II dated 06.01.2023 (copy enclosed) on the above subject, inviting fresh critical 'Problem Statements' for the Smart India Hackathon 2023 which will be used to challenge students of *Higher Education Institutions* (*HEIs*) for offering innovative technical solutions.

2.   Each Organisations/ Divisions under the Department is requested to send their problem statement (s) for SIH 2023 to e-Gov Section (<u>egov-mowr@nic.in</u>) by <u>03.02.202</u>3 positively for onward transmission to Department of Higher Education, as per details given below:

(i)   Problem Statement (PS)/ challenges which is governance-related;
(ii)   Problem statement must contain title/ description/ name of orgn./ category/ theme/ Youtube link explaining the PS/ dataset link;
(iii) Nominate 3-4 experts per PS (for pre-screening round);
(iv) Nominate 1-2 mentors per PS (training & to guide students);
(v)   Nominate 3-4 judges per PS (for evaluation process for grand finale)

Encl: As above

(B.H.T. Vaiphei)
Under Secretary (e-Gov)
Tel: 011-23766944

To

<u>All Wing Heads/ Heads of Organizations/ Attached/ Subordinate Offices/ Autonomous Bodies/PSUs of the Department</u>

Copy To: PPS to JS (Admin, IC & GW)

के. संजय मूर्ति, भा.प्र.से.
सचिव

K. SANJAY MURTHY, IAS
Secretary

Tel. : 011-23386451, 23382698
Fax : 011-23385807
E-mail : secy.dhe@nic.in

भारत सरकार
Government of India
शिक्षा मंत्रालय
Ministry of Education
उच्चतर शिक्षा विभाग
Department of Higher Education
127 'सी' विंग, शास्त्री भवन, नई दिल्ली–110 001
127 'C' Wing, Shastri Bhawan, New Delhi-110 001

D.O. No. 36-1/2023-TS.II
6th January, 2023

Dear *Secretary*,

Ministry of Education in coordination with All India Council for Technical Education (AICTE), is launching 'Smart India Hackathon (SIH) 2023' and we wish to invite your State Government/Ministry/Department to join us by sharing critical 'Problem statements' which will be used to challenge students of HEIs for offering innovative technical solutions.

In last 6 years, SIH has evolved into World's biggest Hackathon and largest Open Innovation Model. The Hon'ble Prime Minister has graced all the editions of SIH from 2017 and we are keen on ensuring participation of majority of ministries/ departments of central government and as many state governments as possible.

SIH initiative has helped kick-start hackathon culture in India. The previous editions of Smart India Hackathon have proven to be extremely beneficial for the students in establishing startups and employment opportunities in various organizations.

Like past editions, 'Smart India Hackathon 2023' will focus on both Hardware and Software approaches to develop innovative solutions for problems and challenges from various Central Ministries/Departments, State/UT Governments, Public Sector Undertakings,and Industries.

In this regard, we are inviting problem statements from your state government/ Ministry/Departments which will be used to challenge the student community to develop innovative (yet workable) solutions. **A sample problem statement is attached as an annexure A.** In this regard, I request you the following:

1. **Identify a Joint Secretary/Director level official** as 'Nodal Officer' to coordinate SIH 2023 on behalf of your State Govt/ Ministry/Department.

2. **Identify 3-10 governance-related challenges/problems faced by your Govt/Ministry/ Department** (or subordinate/autonomous bodies under the Ministry/Department). These challenges/problem statements shall be the ones that can be solved using digital technologies (software or hardware solutions). The problem statement and details of 'Nodal Officer' to be shared with Dr. Abhay Jere, Chief Innovation Officer, Room No. 316, AICTE Headquarters, Nelson Mandela Marg,Vasant Kunj, New Delhi – 110070 and email the copy of letter to pstocio@aicte-india.org; sarim.moin@gov.in; hackathon@aicte-india.org on or before 10th February 2023.

3. **Nominate 3-4 experts per problem statement (For Pre-Screening Round),** who will help in screening and evaluating the ideas (online evaluation) given by students during the Initial phase of SIH 2023. The details (Name, Email ID and Mobile Number) of the experts to be provided on or **before 10th February 2023 along with the list of the Problem Statements.**

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4. **Nominate 1-2 Mentors per problem statement for Training and Mentoring Sessions(online)**, to guide students on expected outcomes about the problem statement and help develop a workable solution for the Grand Finale of the SIH 2023.

5. **For Grand Finale, nominate 3-4 Judges per problem statement for the evaluation process (offline/physical evaluation) during the Grand Finale of SIH 2023.** Travel, Accommodation, Honorarium (if any) and any other logistics needs to be taken care by your Ministry/Departments for the Judges.

The details (Name, Email ID and Mobile Number) of Problem Statement Experts and Judges to be shared on or before 30th March 2023 through an official letter and copy of the letter to be email to the aforementioned address and email IDs respectively.

6. Offer Prize of ₹1,00,000/- per problem statement to the winning teams. An additional ₹25,000/- per Problem Statement to be deposited for the Mementoes, trophies, Certificates and Dummy Cheque for the participating teams against the published problem statement. In total, the expected expense per problem statement is ₹1,25,000/ which needs to be deposited on or before 20th February 2023. The Account No. is 37903899633 and account is maintained at State Bank of India, SHASTRI BHAWAN RAJENDRA PRASAD ROAD NEW DELHI-110001, IFSC Code SBIN0050203. **An Authorization Letter of the Account Details is attached as Annexure B.**

7. Finally, we also wish to seek your commitment in supporting the further development and deployment of the winning ideas post hackathon by engaging the students of the winning team.
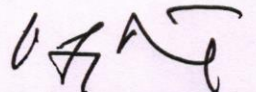
Further coordination on behalf of this ministry will be done by Dr. Abhay Jere Chief Innovation Officer, MoE (cio-mhrd@gov.in) and Sh. Sarim Moin, Innovation Officer, (+91-9650434768; sarim.moin@gov.in).

I sincerely hope that you will join us in SIH-2023 initiative and help us in promoting theculture of ideation, innovation and startup amongst our youngsters.

with regards.

Yours sincerely,

Encl. As above

(K. Sanjay Murthy)

Secretaries to the Government of India

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<center>**Annexure A**</center>

Sample Problem Statement 1:

Title of Problem Statement (One-Liner):

Description (Background, Detailed Description and Expected Solution): Development of a deep Convolutional Neural Network (CNN) for Tropical Cyclone intensity estimation using half-hourly INSAT-3D IR Images and development of a web application for visualization of the imagery. INSAT3D/3DR observations are available at every 15-minute interval and these observations are very useful in understanding the instantaneous structural changes during evolution, intensification, and landfall of Tropical Cyclones. Datasets of Cyclones captured by INSAT-3D over the Indian Oceans are available since 2014. These datasets can be used for training and testing of the Model. Traditional methods for Intensity estimation require accurate center determination for intensity estimation. Development of CNN based model for intensity estimation will be very useful during the initial stage of cyclone formation when determination of accurate center becomes difficult. For datasets and additional information, please visit https://vedas.sac.gov.in/en/sih2022.html

Organization (Ministry/Department Name): Department of Space, Indian Space Research Organisation (ISRO).

Category (Hardware/Software): Software

Theme (Available at www.sih.gov.in): Disaster Management

Youtube Link/Video Link (3 Minute video explaining the Problem Statement): NA

Dataset Link (real-data or dummy data): https://vedas.sac.gov.in/en/sih2022.html

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Sample Problem Statement 2:

Title of Problem Statement (One-Liner): OCR of Temple inscriptions and translations in Devanagari Scripts.

Description (Background, Detailed Description and Expected Solution): "There are lakhs of inscriptions that are scattered throughout the length and breadth of our Great Nation. These inscriptions were usually found on the walls of the Heritage sites like Forts. Temples and other ancient structures, so that people in that era could access them. A common man is deprived of this great knowledge, which if deciphered into Devanagari script can shed light into lot of crucial aspects for the mankind. Background- Inscriptions are a great source to look back to ancient history and learn from it, discover truths and may be secrets of life. Apart from the inscriptions in the country, there are inscriptions in Sri Lanka and South East Asia, where we can find abundant inscriptions in local languages, Sanskrit and Tamil. These inscriptions were mainly inscribed to propagate the orders of the rulers and to proclaim the grants and also other social activities. For example, through Uttaramerur Inscription in Tamil Nadu State, we can understand the excellent and perfect democratic set up that was present in our Nation that too 1000s of years before present. In India, these inscriptions are almost in all the languages of the country. To show an example, the 436 Inscriptions that were dated before many years are in the languages viz. Sanskrit (verse), Sanskrit verse in Grantha, Sanskrit in Grantha, Sanskrit, Grantha & Sanskrit, Sanskrit verse in Nagari, Sanskrit in Grantha and Tamil, Sanskrit Nagari, Sanskrit Sarada, Sanskrit in Gaudiya, Sanskrit & Tamil, Sanskrit & Telugu, Sanskrit in Telugu

& Telugu, Sanskrit in Kannada, Sanskrit verse in Malayalam, Oriya Sanskrit & Telugu, Tamil Vatteluthu Sanskrit, Tamil in Grantha, Tamil Verse, Tamil, Tamil Vatteluthu, Vatteluthu, Archiac Vatelluthu, Tamil & Telugu, Tamil & Kanarese, Tamil & English, Telugu, Kanarese, Kannada, Kannada in Nagari, Kannada in Grantha, Telugu & Kannada, Malayalam, Mahrathi, Mahrathi in Nagari, Uriya/ Oriya, Tamil Grantha & Mahrathi Nagari. Further, each language had many scripts in itself. For example, Tamil language inscriptions had been inscribed in Tamil Vatelluthu, Archiac Vatteluthu, Tamil Pandya Grantha, Tamil Pallava Grantha, and later period Tamil letters which itself have a few varieties, at different period of time. In the same way, inscriptions in Sanskrit languages are inscribed not only in Nagari, Sarada, Mythili, Gaudiya and Deva Nagari scripts but also in local scripts. Brahmi and its local variants are important ancient scripts. Walls, floors, plates, swords, stones, pillars in temples, coins and all remarkable monuments have inscriptions which are hidden treasure for lives to come. With the wisdom of our mighty kings, saints, philosophers, these inscriptions were carved. To gain insights in all areas such as politics, social values, economic and judicial records and approaches inscriptions are invaluable for an unbiased study of history and psychology. Many of the inscriptions are couched in extravagant language but when the information gained from inscriptions can be corroborated with information from other sources such as still existing monuments or ruins, inscriptions provide insight into India's dynastic history that otherwise lacks contemporary historical records. Relevance/Detailed Description Of the 1,00,000 inscriptions found by the Archaeological Survey of India, about 85% were found in South India and attempts are made to preserve and read them. The fact that they are carved in old scripts such as Prakrit, Sanskrit, Brahmi makes it difficult to understand and reach to the new generations in India, hence, newer ways of understanding and converting them in easy interpretable formats such as Devanagari script is utmost important. Objectives Epigraphical studies about ancient Indian Inscriptions must be made much smoother, interesting and insightful. Most appealing form of capturing the hidden meaning in these inscriptions, is to recognize them optically and deduce the inscripted messages into most commonly understandable scripts such as Devanagari. Devanagari is the widely used lipi or script that can be used as a result of OCR done on the images captured of these monuments with inscriptions. Further the objective is to come up with ways and means to make meaningful digital application/s that can use this information and generate knowledge, spread massive awareness, and support cultural and ancient wisdom upliftment and enrich understanding of Indian history and culture. The objective of this problem statement solution is also to come up with innovative solution which can use OCR techniques to transform inscriptions into meanings using easy Devanagari script and scales to reach to the common man in the country."

Organization: Indian Knowledge System (IKS), All India Council for Technical Education (AICTE)

Category (Hardware/Software):: Software

Theme (Available at www.sih.gov.in): Heritage & Culture

Youtube Link/Video Link (3 Minute video explaining the Problem Statement): NA

Dataset Link (real-data or dummy data): NA

Annexure B

Performa II

"AUTHORISATION LETTER"

I/We All India Council For Technical Education, New Delhi would like to receive the sums distbursed by the Ministry of Human Resourse and Development, Department of Hugher Education, Shastri Bhawan, New Delhi to us Electronically to our Bank Account, detailed below:

Payee's Particulars								Bank Details					
Name of Payee as in bank account	Address	District	Pin Code	State	Telephone Number with STD code	Fax No.	E-mail address (if any)	Name of Bank	Bank Branch (full address & telephone number	Bank Account Number	Account Type	Mode of Electronic Transfer Available	IFSC Code	MICR Code
												RTGS/ NEFT/ Any other		
Innovation Cell Accocunt All India Council For Technical Education, New Delhi	Nelson Mandela Marg, Vasant Kunj, New Delhi	New Delhi	110070	Delhi	011-29581125 011-29581127		blrama@aicte-india.org	State Bank of India	Shastri Bhawan, New Delhi	3790389633 (INNOVATION CELL ACCOUNT)	Savings	RTGS/ NEFT	SBIN0050203	110002742

Account Number has been verified by me

Manager
(Bank Branch Maintaining the Account)
Seal

Signature (Name)

DRAWING & DISBURSING OFFICER
All India Council for Technical Education
Name of the Organization(Ministry of Human Resource Development)
Nelson Mandela Marg, Vasant Kunj,
NEW DELHI-110067

Registration Number
Authority & Place
Date of Registration

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