



## Smart India Hackathon – 2020 Software & Hardware Edition College Level Hackathon (Prelim for SIH 2020)

### Notice: - Solution Idea Submission

Dear Students

It's great to tell you that Smart India Hackathon (SIH) 2020 problem statement has been announced. As per [guideline of SIH 2020](#), it is instructed to submit the solution idea of one and only one problem statement by each team. Participants are required to go through the problem statements given on SIH portal.

**SIH 2020 Problem Statements: - <https://www.sih.gov.in/sih2020PS>**

**SIH 2020 portal: - <https://www.sih.gov.in/about>**

All students are hereby informed to build their team to participate in Hackathon organized by institute. Solution idea of the selected teams through this hackathon only will be submitted to SIH 2020 software & Hardware edition. **Following is the google form for submitting Team details and Solution idea, which must be submitted only by team leader on/before 5<sup>th</sup> January 2020 for software edition and 10<sup>th</sup> January 2020 for Hardware edition. A team can choose any one problem statement from each category (Software/Hardware).**

**Google Form Link to Team Details Submission: - <https://forms.gle/Vw5WTvXtEjG9aoyB6>**

Team formation Rules [according to SIH 2019] & Instructions for Google Form submission: -

- There must be 6 members in a team, including Team Leader and minimum one girl member.
- Each team must have a unique team name.
- No team member can be in two different teams i.e. a team must have unique members only for one type of hackathon.
- All members must have a valid Email ID and working phone number.
- All members must be from the same institute, but they can be from any department and any semester.
- The team must agree for not to be a member of any other team.
- Each team must have atleast one faculty (Maximum two) mentor from the institute.

Prepare PPT of the solution for any one problem statement and convert/save it as PDF. Solution idea must be submitted in PDF format. Short description and Problem Statement Number (PS Number) is given in the next pages. A team must select only one problem statement to work on from the given list only.

Hackathon will be tentatively scheduled between **13<sup>th</sup> – 18<sup>th</sup> January** and **25<sup>th</sup> – 30<sup>th</sup> January 2020** for software and hardware respectively. Duration of the hackathon will be **24 – 36 Hrs**. First round of screening will be done based on the submitted ideas on/before 5<sup>th</sup> & 10<sup>th</sup> January 2020 for software and hardware problems respectively. [Click to download sample PPT/PDF.](#)

Check [FAQs](#) for more information.

Build the best team to win and Submit a great Idea.

All the best!

Sd/-  
SPoC, SIH 2020  
MIT Muzaffarpur



<u>Read it as:</u> -	<i>Problem Statement Title</i>	<i>Category</i>	<i>PS Number</i>
1.	Better and faster emergency care during accidents and vehicle impact.	Software	RA25
2.	Gamification for Health data collection	Software	CH46
3.	Lab Report Digitization / OCR	Software	VA47
4.	Create an affordable solution through image processing of number plates of vehicles for the detection, identification and monitoring of vehicles in different scenarios such as residential societies, tolls, business complex, parking spaces etc.	Software	CB31
5.	Voice Prescription	Software	AP63
6.	PREDICTION OF TARIFF RATE	Software	PU131
7.	Virtual Assistant for Medical Device	Software	UP176
8.	Creating Ability to Server Logs Management for Analysis & Report of Heterogeneous Servers	Software	AK209
9.	Warning System for Driver	Software	UK149
10.	Anti-Theft Systems for 2 wheelers	Software	UK151
11.	Mid-Day Meal Analytics	Software	AM291
12.	Antimicrobial Stewardship Platform	Software	AN314
13.	Elderly care system	Software	AN319
14.	NYKS requires a software / Mobile through which we may take attendance of the Officers who are working in the different districts and States across the country.	Software	DK1
15.	An Mobile based Inventory Management System using QR code application	Software	AK12
16.	Smart Management of Food Storage and Waste Reduction	Software	AG50
17.	Smart Management of Street lights for Energy Conservation	Software	AG51
18.	Community oriented policing (Digital Policing)	Software	RK57
19.	Cities have issues of safety. There is data available in cities, which indicate a particular section being more unsafe than others. What should be done with these unsafe parts of any city to increase the safety of our citizens?	Software	BC74
20.	Every part of our country is very rich in its heritage and culture. However, awareness about the same can be increased in the local residents. What needs to done increase the ownership amongst the citizens towards the heritage (both tangible and intangible)?	Software	BC76
21.	People come to cities because of better health facilities as well. What should be done to improve the health facilities in the city and also provide equitable access for all?	Software	BC77
22.	Disasters act as a shock to density. Cities of tomorrow What should be done?	Software	BC78
23.	Cities provide more opportunities for people to grow economically. However, these opportunities are unequal because of knowledge asymmetry. How can we ensure that people have more equal access to better economic opportunities/ jobs?	Software	BC79
24.	A Mobile App with Virtual Reality Based Gallery for Heritage Museums of Andaman & Nicobar Islands	Software	DS90
25.	National Web Portal used for designing Job oriented courses with the help of Human Resource data and desirable skill sets from industries.	Software	MK95
26.	Theoretically the bridges are designed having life span of 50 years. However practically the life span of bridges varies between 30 to 40 years. Therefore, it is required to redesign the bridges of length 50m based on geomorphic condition. The solution must be of low cost and longer duration one.	Software	MK103
27.	Smart intelligent traffic accidents monitoring systems	Software	MK104



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28. Alumni Tracking System	Software	DR111	
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30. Stray Cattle Challenge	Software	DR113	
31. Positive psychology games (Mobile/Computer) which help develop a. Respect for right and dignity of women and child b. which help promote objective of Beti Bachao Beti Padoo(BBBP)	Software	AS118	
32. Disruptive innovation for women empowerment	Software	AS119	
33. Technological advances for Retail Outlets	Software	AJ128	
34. Technological advances for Retail Outlets	Software	AJ129	
35. Indoor Navigation App	Software	CK139	
36. CAPTCHA/alternative solution for Visually impaired	Software	CK146	
37. Library software for Andaman College	Software	DS165	
38. Computerized fee collection and Transfer Certificate Module	Software	DS168	
39. Incentivized Tech Bin	Software	DS170	
40. Paperless Office	Software	DS171	
41. How to prevent cheating in exams?	Software	DA178	
42. Know your Ghats mobile app facilitating general public use information on Ghats/crematoria existing along Ganga and its tributaries.	Software	PG179	
43. App for online OPD appointment & Hospital Information System	Software	DA192	
44. Making websites meaningful for differently Abled citizens with open source tools	Software	MK205	
45. Develop a Students Grievance Support System.	Software	KB220	
46. I Based Reservation System	Software	BB228	
47. To develop an app and SMS based application which can register the grey market complaint	Software	PJ239	
48. Online STET (State Teacher Eligibility Test) Software or web portal.	Software	SG436	
49. Drone route planning	Software	NM383	
50. AI based crop identification mobile app	Software	NM378	
51. Road maintenance record-keeping system	Software	AD358	
52. Vehicle recognition and compilation in database software	Software	MS333	
53. Software to track the goods through its delivery path and ensure safe delivery	Software	AR245	

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1. Smart clothes for Security Forces	Hardware	CK117	
2. Technological advances in LPG sector	Hardware	AJ130	
3. Tracking of babies discharged from S.N.C.U. (Sick New Born Care Unit), Agartala Government Medical College (AGMC)	Hardware	DB158	
4. Identification of Geo location using Smartphone in absence of internet and mobile network.	Hardware	DB161	
5. Artificial intelligence enabled robotic trash boat to drive & harvest floating trash from urban drain.	Hardware	PG175	
6. Non-invasive Glucometer	Hardware	PR183	
7. Automated Basti (Enema) Preparation machine	Hardware	DA190	
8. Intelligent Scanning System	Hardware	BB233	
9. Solution for initiating some kind of alarm to protect underground fiber while digging the road for construction	Hardware	PJ236	
10. Traffic Clearance for Ambulance / (or other priority Vehicle) through Artificial Intelligence	Hardware	AD362	

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11. Chapati making machine for household      Hardware      PR407
12. Smart Building Energy Management System using Machine Learning      Hardware      PR428
13. CLASS ROOM ATTENDANCE DISPLAY      Hardware      SG433
14. Mini Hydro power project for Schools      Hardware      SG435
15. Clamp-on flow metering      Hardware      NK227
16. Manual operations of Microla and Biola Bottle filling, capping, labelling and packing, leading to spillage and wastage of manpower      Hardware      SG288
17. Last Mile delivery in a multi-storey building of a society      Hardware      AN318
18. Smart Traffic Monitoring and Controlling      Hardware      AG344
19. Landslide monitoring through drones      Hardware      AG52
20. Developing Virtual Reality based solutions      Hardware      SG66
21. IOT based sensors can be used to determine the Machine Runtime      Hardware      SG67
22. Some cities have public transport; some are in process of adding them. What can be done to make public transport attractive and encouraging more and more people using it? What can be done about the last mile connectivity from the available public transport?      Hardware      BC72
23. Cities have people from      Hardware      BC80
24. Digital Imaging of Objects behind Steel walls      Hardware      PC89
25. UAV's for Disaster Identification and alerting System      Hardware      MK93
26. SOLAR POWERED SMART IRRIGATION SYSTEM      Hardware      MK98
27. Way Out for Man-animal conflict especially for protection of agriculture crops from wild animals      Hardware      MK99