

**KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY**

*Indian Institute of Science campus, Bengaluru*

**FORMAT FOR STUDENT PROJECT PROPOSAL FOR THE**

**43rd SERIES OF STUDENT PROJECT PROGRAMME**

***(Hand written proposals will not be accepted, please fill all the details in this MS word file as per the following format. Kindly take a photocopy of completely filled project proposal and Demand Draft for filling up the Google Forms.)***

<https://forms.gle/cpc8fph21B8Tm7bk8>

***Stream B***

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|  | **Name of the College : ATRIA INSTITUTE OF TECHNOLOGY** |
|  | **Project Title: IOT based anti-poaching alarm system using wireless network** |
|  | **Branch: COMPUTER SCIENCE & ENGINEERING** |
|  | **Theme (as per KSCST poster) : FOREST PROTECTION** |
|  | **Name(s) of project guide(s) :**   1. **Name: Prof. Chandini Unnikrishnan**   **Email id :** [**chandini.u@atria.edu**](mailto:chandini.u@atria.edu)  **Contact No.: 9535724081** |
|  | **Name of Team Members (Strictly not more than four students in a batch):** (Please paste the latest passport size photograph adjacent to your respective names)  **Name: RAKSHITHA S**  **USN No.: 1AT16CS081**  **Email id: rakshitha2708@gmail.com**  **Mobile No: 9606775047**  **Name: SRISHTI PANDIT**  **USN No.: 1AT16CS103**  **Email id: panditsrishti098@gmail.com**  **Mobile No.: 8861179638**  **Name: TEJAS R JOSHI**  **USN No.: 1AT16CS113**  **Email id: tejasjoshi98611@gmail.com**  **Mobile No.: 96207829** |
|  | **Team Leader of the Project :**  **Name: SRISHTI PANDIT**  **USN No.: 1AT16CS103**  **Email id: panditsrishti098@gmail.com**  **Mobile No.: 8861179638** |
|  | **Processing Fee Details (Demand Draft should be drawn from Canara Bank / State Bank of India only):  (processing fee of Rs. 1000/- drawn in favour of Secretary, KSCST, Bangalore – 12)**  **Demand Draft No.:**  **Date:**  **Bank name: State Bank of India**  **Note :** Please write Team leader name, Project Title and Name of the College on the backside of the DD. |
|  | **Date of commencement of the Project : 1 feb 2020** |
|  | **Probable date of completion of the project : 31st of July 2020** |
|  | **Scope / Objectives of the project:**  **The main objective of the project is to prevent smuggling activities which are done in the forests and to prevent deforestation by deploying three sensors tilt sensors, sound sensors and temperature sensors.**  **Whenever there is a situation of bending of the tree due to storms, thunderstorm, adverse environmental conditions, this sensor helps to detect it.**  **And whenever the situation, such that high temperature, temperature sensor plays a major role.**  **And when the situation such as a person hitting the tree and cutting it, Sound sensor plays a major role which are all important.**  **This all are maintained using an app called BLINK which stores all the information and details of sensors and the data related to tree.** |
|  | **Choosing the hardware components**   1. **Battery** 2. **Arduino Uno** 3. **Sound Sensor** 4. **Temperature sensor** 5. **Tilt Sensor** 6. **Relay** 7. **Water Pump** 8. **Wires**   **Software Requirements**   1. **Python3** 2. **ARDUINO SOFTWARE**   **System Design:**  **System is designed, developed and tested using agile methods.**  **Testing of the device is performed on the prototype of visually related surrounding environment.**  **The flow diagram of the system is given below:**    **Methodology:**   1. **This system will consists of two modules one involving sensors and controller module which will be at tree spot and another one is at the android phone.** 2. **The BLYNK application will continuously receive sensor data.** 3. **This is an IOT based project where the sensor data is continuously uploaded to the cloud(BLYNK server) over a WIFI module.** 4. **Tilt sensors and the buzzer turns on when the trees bends and for the temperature sensor water pump is turned on in case of forest fire through relay switch.** 5. **All the sensors and the controller will be set up at the tree. When logging occurs , the sound generated due to axing the tree is sensed by the sound sensor. Aurdino through the relay switch activities the buzzer notifying the security personnel. Also if the tree bends beyond threshold angle, the buzzer is activated.**       **Note:** In case of fabrication work in the project, an engineering drawing with dimensions / detailed design should be attached to the proposal. |
|  | **The main purpose of this project is to protect the valuable trees such as sandalwood, teakwood, rosewood etc.... Using this system, we can easily track the poaching activity which reduces deforestation and helps in maintaining the ecological balance and also protects the wildlife. It uses various sensors such as vibration sensor and accelerometer to detect the vibration and the angle of tree while it is being cut. Flame detector is also used. The invention has follow advantages: low cost, small power consumption, simple structure and convenient installation.. Here, we proposed wireless controlled system for poaching of tress**  **Expected Outcome of the project:**  **Smuggling can be prevented and there will be no deforestation seen.** |
|  | **Is the project proposed relevant to the Industry or Institution? :**  **Yes / No : Yes**  **If Yes, Please provide details of the Industry / institution and contact details :**  **Atria Institue of Technology**  **Anand nagar ,hebbal, Bengaluru-560024**  (**Note:** Preference will be given to those projects relevant to the industry / institution. Hence be specific in giving detailed information). Is the industry extending support - technology / funds / use the final product, please specify. |
|  | **Can the product or process developed in the project be taken up for filing a Patent?**  **Yes / No : N0**  **Prior Art search done?**  **Yes/No :**  **Note:** If Yes, you may contact Patent Information Centre of KSCST  for more details  Email : [patent@kscst.iisc.ernet.in](mailto:patent@kscst.iisc.ernet.in) |
|  | **Budget details (break-up details should be given) :**   |  |  | | --- | --- | | **Budget** | **Amount** | | a) Materials / Consumables | 1779.00 | | b) Labor | 0.00 | | c) Travel | 1500.00 | | d) Report | 500.00 | | e) Miscellaneous | 2000.00 | | **Total** | 5779.00 |  |  |  |  | | --- | --- | --- | | **Sl no** | **Component name** | **Price** | | 1 | Battery and temperature, tilt, sound sensors | 500, 234, 400, 100 | | 2 | Arduino Uno | 345 | | 3 | Relay | 50 | | 4 | Buzzer | 50 | | 5 | Water pump | 100 | |  | Total | 1779/- | |
|  | **Any other technical details (Please specify) :** |
|  | **SPP Coordinator (Identified by the college) :**  **Note:** To be identified by the principal of the institution. The project proposals must be submitted to KSCST through SPP coordinator designated by the Principal.  **Name: Dr. Shanthi Mahesh**  **Email id : shanthi.mahesh@atria.edu**  **Contact No.: 9900021131** |

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| **Prof. Chandini Unnikrishnan**  **(Name &Signature of Project Guide with Seal)** | **Dr. Aishwarya P**  **(Name &Signature of HOD with Seal)** |
| **Email id:** [**chandini.u@atria.edu**](mailto:chandini.u@atria.edu) | **Email id:** |
| **Contact No.: 9535724081** | **Contact No.:** |

**DECLARATION**

**(From Project Students)**

We, the project team hereby declare that the details enclosed in the project proposal are true and correct to the best of our knowledge and belief and we undertake to inform KSCST of any changes therein in the project tile, students name will be intimated immediately. In case any of the above information is found to be false or untrue or misleading, we are aware that we may be held liable for it. We hereby authorize sharing of the project information with this project proposal with the Karnataka State Council for Science and Technology, Bangalore.

We are aware that the project team has to exhibit / demonstrate the project in the nodal centre and interact regarding project with the experts and to exhibit the project in the State Level Seminar and Exhibition (if selected). If the student team fails to attend the evaluation in nodal centre or fails to attend the State Level Seminar and Exhibition, the supported project amount will be returned back to KSCST.

We also hereby, enclose the endorsement form to KSCST, Bengaluru.

**Name of the students Signature with date**

1. Rakshitha S
2. Srishti Pandit
3. Tejas R Joshi

**ENDORSEMENT**

**(From College, endorsement to be taken in the institution / Department Letter head)**

This is to certify that 1) Mr. / Ms.……...................., 2) Mr. / Ms. ……………................  
3) Mr. / Ms. …………………............, 4) Mr. / Ms. ……………………................, are bonafide student(s) of Department of ......................................................., in the degree program of our institution. If the project proposal submitted by these students under the 43rd series of Student Project Programme is selected by KSCST, we will provide the requisite laboratory / Computer / infrastructure support in our college / Institution. Further we also take necessary steps to see that the project team will exhibit / demonstrate their project in the nodal centre and in the State Level Seminar and Exhibition (if selected). If the student team fails to send the completed project report or fails to attend the evaluation in nodal centre or fails to attend the State Level Seminar and Exhibition, the supported project amount will be returned back to KSCST.

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| **(Name & Signature of  Project Guide with Seal)** | **(Signature of HOD with Seal)** | **(Signature of the Principal with Seal)** |
| **Email id:** | **Email id:** | **Email id:** |
| **Contact No.:** | **Contact No.:** | **Contact No.:** |