

**KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY**

*Indian Institute of Science campus, Bengaluru*

Telephone: 080 -23600978, 23341652 || Email: spp@kscst.org.in

Website: www.kscst.org.in/spp.html or https://kscst.karnataka.gov.in/en

**FORMAT FOR STUDENT PROJECT PROPOSAL FOR THE**

**47th SERIES OF STUDENT PROJECT PROGRAMME**

(Handwritten proposals will not be accepted, please fill all the details in this MS word file, insert images / diagrams wherever necessary. Convert to pdf file, get it approved from the project guide / head of the department and principal of your institution. Keep ready the scanned pdf file of 1) Declaration and Endorsement 2) details of processing fees made and fill-up the Google Form.

https://forms.gle/mE8Q4pM2nwZQuHbi9

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|  | **Name of the College: GM INSTITUTE OF TECHNOLOGY** |
|  | **Project Title: Detecting Criminal Activities from CCTV** |
|  | **Branch: INFORMATION SCIENCE AND ENGINEERING** |
|  | **Theme (as per KSCST poster): Healthcare management, Information Technology, Resources and Environmental Management. (The project proposals shall mandatorily be from one of the broad themes / areas. Visit website www.kscst.org.in/spp.html)** |
|  | **Name(s) of project guide(s):**   1. **Name: Mrs. NASREEN TAJ MB**   **Email id: nasreent@gmit.ac.in**  **Contact No.: 9844250330**   1. **Name: Prof. / Dr. / Mr. / Mrs.**   **Email id:**  **Contact No.:** |
|  | **Name of Team Members (Strictly not more than four students in a batch):** *(Type names in Capital Letters as provided in your college)* (Please paste the latest passport size photograph adjacent to your respective names)  **NAME: BHOOMIKA GB USN No.: 4GM20IS008**  **Email id: bhoomikagb03@gmail.com**  **Mobile No: 8660781296**    **Name: BHUVANA BG**  **USN No.: 4GM20IS009**  **Email id:bhuvanbgbhuvanabg@gmail.com**  **Mobile No.: 7975636701**  **Name: KAVANA M**  **USN No.: 4GM20IS022**  **Email id:kavanamnaik761@gmail.com**  **Mobile No.: 7760265761**    **Name: SHREYA**  **USN No.: 4GM20IS046**  **Email id: shreyashreya2322@gmail.com**  **Mobile No.: 8123287639** |
|  | **Team Leader of the Project:**  **Name: SHREYA**  **USN No.: 4GM20IS046**  **Email id: shreyashreya2322@gmail.com**  **Mobile No:8123287639** |
|  | **Processing Fee Details (Through Online Payment only):  (processing fee of Rs. 1000/-)**  **Please furnish the payment details in the format provided in the last page of the proposal.** |
|  | **Date of commencement of the Project: 11/09/2023** |
|  | **Probable date of completion of the project: 04/05/2024** |
|  | **Scope / Objectives of the project:**  **Objectives of our project are as follows:**   * **Object Recognition:** Utilize object detection algorithms to accurately identify and classify objects and people in the video frames. This includes recognizing common objects, as well as distinguishing between different types of objects (e.g., humans, vehicles, weapons). * **Anomaly Detection:** Employ machine learning techniques for anomaly detection to identify unusual behavior or activities that deviate from normal patterns. This can include behaviors such as loitering, aggressive movements, or suspicious interactions. * **Alerting Mechanism:** Implement a notification system that generates alerts or alarms when potentially criminal activities are detected. These alerts should be sent to designated personnel or authorities for immediate action. * **Scalability:** Ensure that the system is capable of handling a large number of CCTV cameras simultaneously, allowing for effective monitoring of a wide area. |
|  | **Methodology:**    **A. DATA COLLECTION:**  Gather a diverse dataset of medical prescription images, including variations in handwriting, formatting, and content. Ensure that prescriptions cover a wide range of medical conditions and medication types.  **B. DATA PRE PROCESSING:**  Implement data preprocessing steps for prescription images, including resizing, noise removal, and padding, to enhance image quality and facilitate accurate text recognition.  **C. DATA ANNOTATION:**  Use the Labelling software to annotate prescription images by adding bounding boxes around medicine names and other critical prescription details. Label and categorize each annotation accurately.  **D. YOLOv5 MODEL TRAINING:**  Train the YOLOv5 object detection model on the annotated dataset to detect and locate medicine names on prescriptions. Continuously iterate the training process until satisfactory accuracy is achieved.  **E. HANDWRITTEN TEXT DATASET:**  Collect a dataset of handwritten text for training the text recognition model. This dataset should include a variety of handwriting styles and variations.  **F. TEXT RECOGNITION MODEL TRAINING:**  Develop and train a text recognition model using deep learning techniques on the handwritten text dataset. The model should be capable of accurately recognizing Extracting text from prescription images.  **G. TESTING AND VALIDATION:**  Conduct extensive testing and validation to ensure system accuracy, reliability, and usability. Benchmark the system against real-world prescriptions to assess performance.  **H. USER SUPPORT AND MAINTENANCE:**  Offer On going user support and system maintenance to address issues, gather user feedback, and adapt to evolving healthcare standards and regulations.  **Note:** In case of fabrication work in the project, an engineering drawing with dimensions / detailed design should be attached to the proposal. |
|  | **Expected Outcome of the project:**   * **The development of the Medical Prescription Optical Character Recognition (OCR) system represents a significant milestone in the field of healthcare technology. This project has aimed to address the challenges in prescription management and empower healthcare professionals and patients with accessible, accurate, and understandable prescription information** |
|  | **Is the project proposed relevant to the Industry / Society or Institution?**  **Yes / No: NO**  **If Yes, please provide details of the Industry / institution and contact details:**  (**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: No**  **Prior Art search done?**  **Yes/No: NO**  **Note:** If your answer is “Yes”, you may contact Patent Information Centre of KSCST. For more details, email: pic@kscst.org.in |
|  | **Budget details (break-up details should be given):**  Note: KSCST will provide nominal grant support for carrying out the project by students if selected by the project selection committee.   |  |  | | --- | --- | | **Budget** | **Amount** | | a) Materials / Consumables (Please specify) | 2000.00 | | b) Labor (Describe) | 0.00 | | c) Travel (Describe) | 1000.00 | | e) Miscellaneous (Please specify) | 1000.00 | | **Total** | 4000.00 | |
|  | **Any other technical details (Please specify):**  HARDWARE AND SOFTWARE REQUIREMENTS:  Hardware Specifications:   |  |  | | --- | --- | | Processor | Intel® Core™ I5 | | System Type | 32- Or 64-Bit Operating System | | RAM | 8GB RAM Minimum; 16 GB RAM Recommended | | Storage | Storage Capacity Of At Least 10 GB,  SSDs are preferred for faster data access |   Software Specifications:   |  |  | | --- | --- | | Deep Learning Framework | TensorFlow, PyTorch | | Data Management Tools | Scikitlearn, Pandas | | Programming Language | Python | | Development Environment | Jupyter | |
|  | **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. Srinivasa CV**  **Email id: srinivasacv@gmit.ac.in**  **Contact No:9448588792** |

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| **Name of the Project Guide: Mrs.Nasreen Taj MB** | **Name of the HOD:** |
| **Email id: nasreent@gmit.ac.in** | **Email id:** |
| **Contact No.: 9844250330** | **Contact No.:** |

**DECLARATION**

**(From Project Students)**

(To scan this page and enclose in the project proposal)

We, the project team hereby declare that the details enclosed in the project proposal (Title of the Project: ……………………………………………………….., Branch: ………………………., College: ………………………………………………………..) 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 title, students name will be intimated immediately through project guide. 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, Bangaluru.

We are aware that the project team must 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 to KSCST.

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

**Name of the students with USN No. Signature with date**

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

**ENDORSEMENT**

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

(To scan this page and enclose in the project proposal)

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 47th 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 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.:** |

**DETAILS OF PROCESSING FEES MADE THROUGH   
NEFT / UPI PAYMENT**

(**Note:** Include this page in the softcopy of the student project proposal. The student team shall furnish the details in the Google Form. It is informed to the students to 1) keep ready the softcopy of the project proposal and other documents and 2) Furnish the payment made details as processing fees and 3) update the details in the Google Form on the same day of payment made to KSCST by NEFT / UPI payment).

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| --- | --- | --- |
| 1. TITLE OF THE PROJECT | : |  |
| 1. NAME OF THE TEAM LEADER | : |  |
| 1. EMAIL ID | : |  |
| 1. CONTACT MOBILE NO. | : |  |

**PAYMENT MADE DETAILS**

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| --- | --- | --- |
| 1. BANK REF. NO. / UTR NO. / UPI No. (12 digits) | : |  |
| 1. TRANSACTION ID | : |  |
| 1. NAME OF THE SENDER / ACCOUNT HOLDER and CONTACT NUMBER | : |  |
| 1. NAME OF THE BANK | : |  |
| 1. PROCESSING FEES | : | Rs. 1000/- |
| 1. DATE OF PAYMENT MADE | : |  |
| 1. TIME | : |  |
| 1. MODE OF PAYMENT MADE (NEFT / UPI, PLEASE SPECIFY) | : |  |

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| (Name & Signature of  the team leader) | (Name & Signature of  Project Guide or HOD with Seal) |

**KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY**

Indian Institute of Science campus, Bengaluru

**47th SERIES OF STUDENT PROJECT PROGRAMME (SPP)**

***(Note: This page is for information about bank details of KSCST to the student team and college / institution and not to include this page in the project proposal softcopy)***

**BANK ACCOUNT DETAILS OF KSCST**

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| Name and address of the Institution | Karnataka State Council for Science and Technology, IISc Campus, Bangalore -560012 |
| Account holder’s name / Designation | Secretary, Karnataka State Council for Science and Technology |
| Bank Account No. & Name of the bank | Current A/C No. 0683201000024 Canara Bank, IISc Campus Branch, Bangalore-560012 |
| IFSC Code | CNRB0000683 |
| MICR Code | 560015023 |
| Bank Branch Address | Canara Bank, Indian Institute of Science, Bangalore-560012 |

