



KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
Indian Institute of Science campus, Bengaluru

**FORMAT FOR STUDENT PROJECT PROPOSAL FOR THE
44th SERIES OF STUDENT PROJECT PROGRAMME**

(Handwritten 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/yqSYxZRP6uJsP5QA8>

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|----|---|
| 1. | Name of the College: R R Institute Of Technology |
| 2. | Project Title: Deepfake Creation and Detection Using Cycle GANs |
| 3. | Branch: Computer Science |
| 4. | Theme (as per KSCST poster) : (The project proposals shall mandatorily be from one of the broad themes / areas. Visit website www.kscst.org.in/spp.html) Cyber Security |
| 5. | Name(s) of project guide(s) : 1. Name: Prof. SHRUTHI S Email id : cse@rrinstitutions.com Contact No. : 9731553398 |
| 6. | Name of Team Members (Strictly not more than four students in a batch): <i>(Type names in Capital Letters as provided in your college)</i> (Please paste the latest passport size photograph adjacent to your respective names) Name: CHARAN K USN No.: 1RI16CS013 Email id: charan1kh@gmail.com Mobile No: 7406867375 |

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|-----|---|
| | <p>Name: NAVEED AHMED USN No. : 1RI17CS027 Email id: naveedna1999@gmail.com Mobile No. : 9535328508</p> <p>Name: SHANKAR R A USN No. : 1RI17CS043 Email id: shankargowda621@gmail.com Mobile No. : 8151927055</p> <p>Name: NIKITH KUMAR N USN No. : 1RI17CS028 Email id: nikithkumarniki160698@gmail.com Mobile No.: 7337637319</p> |
| 7. | <p>Team Leader of the Project :</p> <p>Name: NIKITH KUMAR N USN No. : 1RI17CS028 Email id: nikithkumarniki160698@gmail.com Mobile No. : 7337637319</p> |
| 8. | <p>Processing Fee Details (Demand Draft should be drawn from Canara Bank / State Bank of India only): (processing fee of Rs. 1000/- drawn in favor of Secretary, KSCST, Bangalore – 12)</p> <p>Demand Draft No. :</p> <p>Date :</p> <p>Bank name :</p> <p>Note : Please write Team leader name, Contact No., Project Title and Name of the College on the backside of the DD.</p> |
| 9. | <p>Date of commencement of the Project : October</p> |
| 10. | <p>Probable date of completion of the project : April /May</p> |
| 11. | <p>Scope / Objectives of the project :</p> <ul style="list-style-type: none"> The aim of this project is to provide the reader with a deeper understanding of the creation and detection of deepfakes, the current trends and advances in this field, the weaknesses of current defense solutions, and the areas that require further research and attention. One of the important objectives is to evaluate its performance and acceptability in terms of security, user-friendliness, accuracy, and reliability. |

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| 12. | <p>Methodology :</p> <ul style="list-style-type: none"> • Dataset: There are some sources such as YouTube, Face Forensics++, Deep fake detection challenge dataset, etc, to train the mixed datasets, consisting of equal numbers of images/videos. our newly preparing dataset contains 50% of the original video and 50% of the manipulated deepfake videos. The dataset is split into 70% train and 30% test set. • Preprocessing: Dataset preprocessing includes splitting the video into frames. Followed by face detection and cropping the frame with the detected face. To maintain the uniform number of frames the mean of the dataset video is calculated and the new processed face cropped dataset is created containing the frames equal to the mean. The frames that don't have faces in them are ignored during preprocessing. • Model: The Data Loader loads the preprocessed face cropped video and split the videos into train and test set. Further, the frames from the processed videos are passed to the model for training and testing in mini-batches. <p>Note: In case of fabrication work in the project, an engineering drawing with dimensions / detailed design should be attached to the proposal.</p> |
| 13. | <p>Expected Outcome of the project :</p> <ul style="list-style-type: none"> • The project is designed with a neural network-based approach to classifying the video as deep fake or real. The proposed method is inspired by the way in which deep fakes are created by GANs with the help of Autoencoders. • Our method is used to detect frame level using ResNext CNN and to classify video using RNN along with LSTM. The proposed method is capable of detecting a video as a deep fake or real based on the parameters. |
| 14. | <p>Is the project proposed relevant to the Industry / Society or Institution? :</p> <p>Yes / No: Yes</p> <p>Media and Entertainment</p> <p>Politics</p> <p>Social Media</p> <p>If Yes, Please provide details of the Industry / institution and contact details :</p> <p>(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.</p> |

| 15. | <p>Can the product or process developed in the project be taken up for filing a Patent?</p> <p>Yes / No: No</p> <p>Prior Art search done?</p> <p>Yes/No: Yes</p> <p>Note: If Yes, you may contact Patent Information Centre of KSCST for more details</p> <p>Email : patent@kscst.iisc.ernet.in</p> | | | | | | | | | | | | | | |
|----------------------------|--|--------|--------|----------------------------|------|----------|------|-----------|------|-----------|------|------------------|------|--------------|------|
| 16. | <p>Budget details (break-up details should be given) :</p> <p>Note : KSCST will provide nominal grant support for carrying out the project by students if selected by the project selection committee.</p> <table border="1" data-bbox="416 725 1259 1308"> <thead> <tr> <th>Budget</th> <th>Amount</th> </tr> </thead> <tbody> <tr> <td>a) Materials / Consumables</td> <td>0.00</td> </tr> <tr> <td>b) Labor</td> <td>0.00</td> </tr> <tr> <td>c) Travel</td> <td>0.00</td> </tr> <tr> <td>d) Report</td> <td>0.00</td> </tr> <tr> <td>e) Miscellaneous</td> <td>0.00</td> </tr> <tr> <td>Total</td> <td>0.00</td> </tr> </tbody> </table> | Budget | Amount | a) Materials / Consumables | 0.00 | b) Labor | 0.00 | c) Travel | 0.00 | d) Report | 0.00 | e) Miscellaneous | 0.00 | Total | 0.00 |
| Budget | Amount | | | | | | | | | | | | | | |
| a) Materials / Consumables | 0.00 | | | | | | | | | | | | | | |
| b) Labor | 0.00 | | | | | | | | | | | | | | |
| c) Travel | 0.00 | | | | | | | | | | | | | | |
| d) Report | 0.00 | | | | | | | | | | | | | | |
| e) Miscellaneous | 0.00 | | | | | | | | | | | | | | |
| Total | 0.00 | | | | | | | | | | | | | | |
| 17. | <p>Any other technical details (Please specify) :</p> | | | | | | | | | | | | | | |
| 18. | <p>SPP Coordinator (Identified by the college) :</p> <p>Note: To be identified by the principal of the institution. The project proposals must be submitted to KSCST through the SPP coordinator designated by the Principal.</p> <p>Name : Prof. / Dr. / Mr. / Mrs.</p> <p>Email id :</p> <p>Contact No. :</p> | | | | | | | | | | | | | | |

(Name & Signature of Project Guide with Seal)

Email id:

Contact No.:

(Name & Signature of HOD with Seal)

Email id:

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.
- 2.
- 3.
- 4.

ENDORSEMENT

(From College, endorsement to be taken in the institution / Department Letterhead)

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 44th 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.

(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.: