KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY
INDIAN INSTITUTE OF SCIENCE CAMPUS, BENGALURU -560012
Telephone: 080 -23341652, 23348848, 23348849, Telefax: 23348840
Email: spp@kscst.iisc.ernet.in Website: www.kscst.iisc.ernet.in/spp.html or www.kscst.org.in/spp.html

FORMAT FOR STUDENT PROJECT PROPOSAL FOR THE 42nd SERIES OF STUDENT PROJECT PROGRAMME

STREAM C : PROJECT PROPOSAL FOR 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://goo.gl/forms/UsilS6ODB0BZL2QC3

For details please Contact email: spp@kscst.iisc.ernet.in and visit
http://www.kscst.iisc.ernet.in/spp.html
Telephone : 080 23600978, 080 23341652 Extn.25

1.	**Name of the College :K.S INSTITUTE OF TECHNOLOGY**
2.	**Project Title** **AUTOMATIC LICENSE PLATE RECOGNITION SYSTEM**
3.	**Branch:** **COMPUTER SCIENCE AND ENGINEERING**
4.	**Broad Theme / Category (as per KSCST poster) :** **INFRASTRUCTURE**
5.	**Name(s) of project guide(s) :** **1. Name : Prof. / Dr. / Mr. / Mrs. ROOPESH KUMAR B.N** **Email id :ROOPESHKUMARBN@KSIT.EDU.IN** **Contact No.:9538367685**

6.	**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)** 1. **Name : VIKASH KUMAR SINGH** **USN No. :1KS15CS120** **Email id :BIKASH.SINGH7870@GMAIL.COM** **Mobile No. :9206301240** 2. **Name : PRITAM RAJ** **USN No. :1KS15CS072** **Email id :PRITAMRAJBPS@GMAIL.COM** **Mobile No. :8969650244** 3. **Name : SUNIL KUMAR SHARMA** **USN No. :1KS15CS108** **Email id :SSUNILKUMAR787@GMAIL.COM** **Mobile No. :9686059624** 4. **Name : PRATEEK** **USN No. :1KS15CS070** **Email id :PRATEEKSINGH450@GMAIL.COM** **Mobile No. :7007828735**
7.	**Team Leader of the Project :** **Name : VIKASH KUMAR SINGH** **USN No. :1KS15CS120** **Email id :BIKASH.SINGH7870@GMAIL.COM** **Mobile No. :9206301240**

8.	**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. :086241** **Date :23-01-2019** **Bank name : STATE BANK OF INDIA** **Note :** Please indicate Team Leader name, Project Title and Name of the College on the backside of the DD.
9.	**Date of commencement of the Project :** 30-11-2018
10.	**Probable date of completion of the project :** 16-04-2019
11.	**Scope / Objectives of the project:** Main objective of the system is automatic number plate recognition (ANPR) in toll payment system.
12.	**Methodology** **Plate Detection** Plate detection refers to a subset of computer technology that is able to identify vehicles number plates within digital images. Plate detection applications focused on detecting within images. **Character Segmentation** In computer vision, image character segmentation is the process of partitioning a digital image into multiple segments (sets of pixels, also known as super-pixels). The goal of segmentation is to simplify and/or change the representation of an image into something that is more meaningful and easier to analyze. Image segmentation is typically used to locate objects and boundaries (lines, curves, etc.) in images. More precisely, image segmentation is the process of assigning a label

	to every pixel in an image such that pixels with the same label share certain characteristics. The result of image character segmentation is a set of segments that collectively cover the entire image, or a set of contours extracted from the image (see edge detection). Each of the pixels in a region are similar with respect to some characteristic or computed property, such as color, intensity, or texture. Adjacent regions are significantly different with respect to the same characteristic. **Character Recognition using OCR** Character Recognition describes a biometric technology that attempts to establish an individual's identity. Also known as facial recognition, the process works using application that captures a digital image of an individual's character recognition using OCR. **Amount Detection & Automatic Mail sending system** In toll gate when vehicles are crossing that time detects vehicles number and amount detects details mail send to the user. **Note :** If this project is an improvised work of the previously awarded project, then you need to submit the proposal under Stream A.
13.	**Expected Outcome of the project :** This paper addresses various issues by presenting proper hardware platforms along with real-time, robust, and innovative algorithms. We have collected huge and highly inclusive data sets of Persian license plates for evaluations, comparisons, and improvement of various involved algorithms. The data sets include images that were captured from crossroads, streets, and highways, in day and night, various weather conditions, and different plate clarities. Over these data sets, our system achieves 98.7%, 99.2%, and 97.6% accuracies for plate detection, character segmentation, and plate recognition, respectively.
14.	**Application of the project :** **1. Industry** **2. Health** **3. Agriculture** **4. Disaster Management** **5. Societal** **6. Education / Academic** (You may provide details also) 5. Societal

	This paper presents an online highly accurate system for automatic number plate recognition (ANPR) that can be used as a basis for many real-world ITS applications. The system is designed to deal with unclear vehicle plates, variations in weather and lighting conditions, different traffic situations, and high-speed vehicles. This paper addresses various issues by presenting proper hardware platforms along with real-time, robust, and innovative algorithms. We have collected huge and highly inclusive data sets of vehicle license plates for evaluations,comparisons, and improvement of various involved algorithms. The proposed algorithms for each part of the system are highly robust to lighting changes, size variations, plate clarity, and plate skewness.
15.	**Is the project proposed relevant to the Industry 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.
16.	**In case of fabrication work in the project, an engineering drawing with dimensions / detailed design calculations (approximately) of the machine / device should be attached to the proposal.**

17. **Can the product or process developed in the project be taken up for filing a Patent?**

Yes / No.

No

If Yes, you may contact Patent Information Centre of KSCST for more details

Karnataka State Council for Science and Technology
Indian Institute of Science Campus, Bengaluru - 560012
Tel: +91-080-2334 1652 / 2334 8848 / 2334 8849
Email : patent@kscst.iisc.ernet.in

18. **Budget details (break-up details should be given) :**

Budget	Amount
a) Materials / Consumables	1000.00
b) Labor	1000.00
c) Travel	2000.00
d) Report	1000.00
e) Miscellaneous	1000.00
Total	6000.00

19. **Any other technical details (Please specify) :**

20. **SPP Coordinator (Identified by the college) :**

(Note: KSCST will be providing financial and technical support to student projects and these projects will be evaluated by experts in identified nodal centres. There will be interaction between students and experts to fine-tune the project in the nodal centre. The project recommended by experts will be selected for state level

	Seminar and exhibition. Hence the role of SPP Co-ordinator is very important to KSCST regarding receipt of project sanctioned, amount released to the College, informing the concerned project guides regarding evaluation of projects and sending the softcopy and hardcopy of the reports to KSCST. Further interacting with the Principal of the institution in submission of statement of expenditure, etc. Hence it is requested that the Principal of the institution to nominate the SPP Co-ordinator for smooth functioning of educational Programmes of KSCST.) **Name : Dr. B.S.Ajaykumar** **Email id : ajayakumarmanju@gmail.com** **Contact No.:9845249046/9483018353**

(Name &Signature of Project Guide with Seal)
Email id: roopeshkumarbn@ksit.edu.in
Contact No.: 9538367685

(Name &Signature of HOD with Seal)
Email id: rekhabvenkatapur@ksit.edu.in
Contact No.: 9740295819

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. VIKASH KUMAR SINGH	
2. PRITAM RAJ	
3. SUNIL KUMAR SHARMA	
4. PRATEEK	

ENDORSEMENT

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

This is to certify that 1) Mr. / Ms PRITAM RAJ 2) Mr. / Ms. VIKASH KUMAR SINGH 3) Mr. / Ms. SUNIL KUMAR SHARMA, 4) Mr. / Ms. PRATEEK, are bonafide student(s) of Department of COMPUTER SCIENCE AND ENGINEERING, in the degree program of our institution. If the project proposal submitted by these students under the 42nd 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.

Prof.ROOPESH KUMAR B N	**Dr.REKHA B VENKATAPUR**	**Dr.T.V.GOVINDARAJU**
(Name & Signature of Project Guide with Seal)	**(Signature of HOD with Seal)**	**(Signature of the Principal with Seal)**
Email id:	**Email id:**	**Email id:**
roopeshkumarbn@ksit.edu.in	**rekhabvenkatapur@ksit.edu.in**	**principal.ksit@gmail.com**
Contact No.:9538367685	**Contact No.:9740295819**	**Contact No.:080-28435722**