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AUTH. SIGNATORY

नाम NAME पदनाम DESIGNATION

ह.अ.सं.
S.P. No.

प्राधिकृत हस्ताक्षर कर्ता
AUTH. SIGNATORY

नाम S.P. No. पदनाम DESIGNATION

DRAWEE BRANCH: BANGALORE ACCOUNTS SECTION (469)

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Gurunandan V. BHAT
गुरुनन्दन वी. भट
केनरा बैंक CANARA BANK
ग्राहकारी OFFICER
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एक लाख और ऊपर ड्रॉफ्ट के लिए दो प्राधिकृत हस्ताक्षरकर्ता की हस्ताक्षर चाहिए।
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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

Stream A

1.	Name of the College : Mangalore Institute of Technology & Engineering
2.	Project Title : Generation of Photo Realistic Images Using GAN and SPADE
3.	Branch: Computer Science and Engineering
4.	Theme (as per KSCST poster) : Other
5.	Name of project guide : 1. Name: Dr. Venkatramana Bhat P Email id : hodcse@mite.ac.in Contact No.: 9448061575
6.	Name of Team Members: Name: Adarsh Krishna Revankar USN No.: 4MT16CS003 Email id: adarshrevankar0123@gmail.com Mobile No.: 9538789520 Name: Akshaya M USN No.: 4MT16CS007 Email id: akshayaram004@gmail.com Mobile No.: 9972368701 Name: Dogra Jagtamba Prasad Shubham USN No.: 4MT16CS025 Email id: dogra.shubham466@gmail.com Mobile No.: 7619671023



7.	<p>Team Leader of the Project :</p> <p>Name: Adarsh Krishna Revankar USN No.: 4MT16CS003 Email id: adarshrevankar0123@gmail.com Mobile No.: 9538789520</p>
8.	<p>Processing Fee Details :</p> <p>Demand Draft No.:737516 Date:11/12/2019 Bank name: Canara Bank</p>
9.	<p>Date of commencement of the Project : 01-10-2019</p>
10.	<p>Probable date of completion of the project : 31-03-2020</p>
11.	<p>Scope / Objectives of the project:</p> <p>Objectives:</p> <ul style="list-style-type: none"> ➤ Semantic Image Synthesis based on user demand. ➤ Accurately modelling images using Segmentation Map. ➤ Spatially Adaptive Interaction among segments of Segmentation Map. <p>Scope:</p> <ul style="list-style-type: none"> ➤ Designers and Artists will find this useful for immediately recreating their ideas. ➤ Architectural design can easily be conveyed by the clients without ambiguity.
12.	<p>Methodology:</p> <p>The task of generating photorealistic images from the Segmentation Map includes a GAN (Generative Adversarial Network). A specific modification of GAN with SPADE (Semantic Image Synthesis with Spatially-Adaptive Normalization) synthesizes visually effective images over suboptimal neural networks such as pix2pixHD, CRN, or SIMS.</p>

1. Dataset:

To train a GAN we require a large number of images with Segmentation Map. Segmentation Map is a manipulated result obtained by applying the function $m \in L^{(H \times W)}$ where, m - Segmentation Mask, H - Height, W - Width of the Image, L - Semantic Labels . Data is obtained from the COCO Stuff dataset [4].

2. GAN:

Generative Adversarial Network consists of Generator and Discriminator. The goal of the generator is to produce realistic images so that the discriminator cannot tell the synthesized images apart from the real images.

3. SPADE:

Spatially Adaptive (De) Normalization is a layer that is used to obtain the normalization of the tensors based on Batch Norm. This provides visual fidelity and alignment with input layouts.

4. CNN:

Convolutional Neural Network, class of deep neural networks, most commonly applied to analysing visual imagery. Major operations of CNN Convolution, Non-Linearity (ReLU), Pooling or Sub Sampling, Classification.

13. Expected Outcome of the project :

- Generation of photorealistic images.
- User friendly interface to give semantic Input.
- Improved visual fidelity and alignment with input layouts.

14.	Is the project proposed relevant to the Industry or Institution? :														
	Yes / No : Yes														
15.	Can the product or process developed in the project be taken up for filing a Patent?														
	Yes / No : Yes														
	Prior Art search done?														
	Yes/No : No														
16.	Budget details :														
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; padding: 5px;">Budget</th> <th style="text-align: center; padding: 5px;">Amount</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">a) Materials / Consumables</td> <td style="text-align: center; padding: 5px;">2500.00</td> </tr> <tr> <td style="text-align: center; padding: 5px;">b) Labor</td> <td style="text-align: center; padding: 5px;">0.00</td> </tr> <tr> <td style="text-align: center; padding: 5px;">c) Travel</td> <td style="text-align: center; padding: 5px;">500.00</td> </tr> <tr> <td style="text-align: center; padding: 5px;">d) Report</td> <td style="text-align: center; padding: 5px;">500.00</td> </tr> <tr> <td style="text-align: center; padding: 5px;">e) Miscellaneous</td> <td style="text-align: center; padding: 5px;">1500.00</td> </tr> <tr> <td style="text-align: center; padding: 5px;">Total</td> <td style="text-align: center; padding: 5px;">5000.00</td> </tr> </tbody> </table>	Budget	Amount	a) Materials / Consumables	2500.00	b) Labor	0.00	c) Travel	500.00	d) Report	500.00	e) Miscellaneous	1500.00	Total	5000.00
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Total	5000.00														
17.	Any other technical details :														
18.	SPP Coordinator (Identified by the college) : <p>Name: Mr. AJITH KUMAR Email id :ajithkumar@mite.ac.in Contact No.:9901225235</p>														

Alfat
(Dr. VENKATRAMANA BHAT.P.)
Dept. of Comp. Sc. & Engg
(Name & Signature of Project Guide with Seal)
Mangalore Institute of Technology & Engineering
Email Bhat@mite.ac.in
Contact No.: 9448061575

Alfat
(Dr. VENKATRAMANA BHAT.P.)
Head of the Dept. of Comp. Sc. & Engg
(Name & Signature of HOD with Seal)
Mangalore Institute of Technology & Engineering
Email id: Bhat@mite.ac.in
Contact No.: 9448061575

DECLARATION

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.

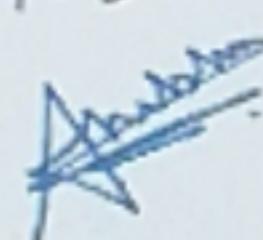
We are aware that the project team has to exhibit / demonstrate the project in the nodal centre and interact regarding project with the experts and to exhibit the project in the State Level Seminar and Exhibition (if selected). If the student team fails to attend the evaluation in nodal centre or fails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

1. Adarsh Krishna Revankar
2. Akshaya M
3. Dogra Jagtamba Prasad Shubham

Signature with date


Adarsh
Krishna
Revankar
Akshaya
M



MANGALORE INSTITUTE OF TECHNOLOGY & ENGINEERING

(An ISO 9001: 2015 Certified Institution)

(A unit of Rajalaxmi Education Trust®)

Affiliated to V.T.U., Belgaum, Approved by AICTE, New Delhi.

ENDORSEMENT

This is to certify that 1) Mr Adarsh Krishna Revankar, 2) Ms Akshaya M
3) Mr Dogra Jagtamba Prasad Shubham, are bonafide student(s) of Department of
COMPUTER SCIENCE & ENGINEERING, 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.

Mangalore Institute of Technology & Engineering
(Name is Signature of
Badaga Mijar, MOODBIDRI - 574 225
Project Guide with Seal)

Head of the Dept. of Comp. Sc. & Engg.
(Signature of HOD with Seal)

(Signature of the Principal
with Seal)

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