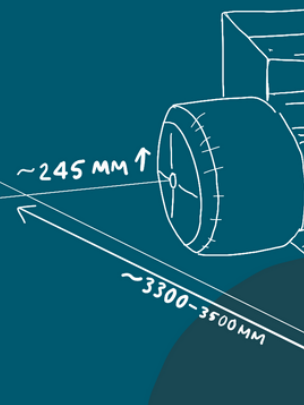
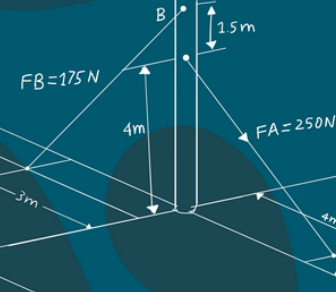
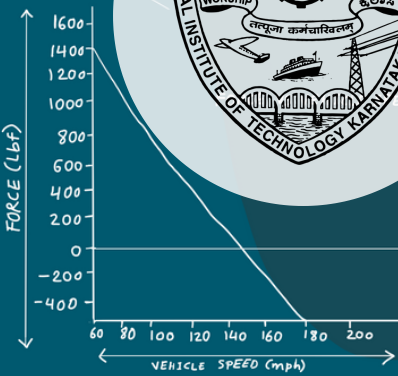


# INDUSTRY SAFETY TRAINING SIMULATION USING AR & VR

AUGUST 2021



BY



Dr. Pruthviraj U



Dr. K V Gangadharan

**Project Title:**

Industry Safety Training Simulation using AR & VR

**Investigators**

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 Dr. K V Gangadharan, Coordinator, Professor, Mechanical, Centre for System Design. NITK Surathkal

**Contact Details**

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**Objectives:**

- i. To develop Industry Safety Training AR VR tools.
- ii. Empower employees to adapt AR VR tools for industry Safety Training in various engineering fields.
- iii. To enable skill and qualification enhancement of employees working on the project.

**Donation / Funding Called for :**

Donation is requested for manpower support to create new AR/VR in Industry Safety Training, to enable skill development and education qualification enhancement of project-staff by registering for M.Tech (Research) or PhD programs. This will ensure continuity of manpower for a certain period of time to drive the project. Support for qualification enhancement of staff of the project including experimental studies and data collection, travel, consumables etc. This project will be executed through the Centre for System Design.

Individual / Groups / Association/ Firms who are willing to make donations can specify the way in which donation is to be used for the project objectives, (Salary component, max salary that can be paid from the donation, consumables, travel, experimental facility, etc ), and can also specify the region/institutions to be focused (like rural engineering colleges, or donor can select a few colleges for providing logistic support to enable them to be adapt "Industry Safety Training Simulation using AR & VR" project. Donnor can also suggest providing the content created by this project to be made available to startups/ commercial firms/ organisations / Institutions etc., they are free to use the content under **Creative Commons licenses**(Attribution-ShareAlike, CC BY -SA)(<https://creativecommons.org/licenses/>)

After making the donation, kindly email us a letter directing the specifics you like us to follow for the "**Industry Safety Training Simulation using AR & VR**" project. Donations made for 2 to 3 years will ensure the JRF/SRF to be supported for a M.Tech (Research) / PhD program degree.

**BUDGETARY REQUIREMENTS**

category	1st year(₹)	2nd year(₹)	total(₹)
Manpower	4807200	4807200	9614400
Equipments	3615000	0	3615000
Consumables	146500	305000	451500
<b>Total(₹)</b>	<b>8568700</b>	<b>5112200</b>	<b>1,36,80,900</b>

**MANPOWER**

Title	₹/month( includes 16% HRA)	No.	1st year (₹)	2nd year(₹)	Total(₹)
Senior Research Fellow( SRF)	40600	2	974400	974400	1948800
junior Research Fellow( JRF)	34800	3	1252800	1252800	2505600
illsultartor / animator	30000	3	1080000	1080000	2160000
Project manager ( minimum 45 year age)	125,000	1	1500000	1500000	3000000
		<b>Total(₹)</b>	<b>4807200</b>	<b>4807200</b>	<b>96,14,400</b>

**EQUIPMENTS**

equipment name	₹/item	No.	1st year(₹)	2nd year(₹)	total(₹)
Windows PC/ workstation	1000000	1	1000000	0	1000000
Mac Server/workstation	1,900,000	1	1900000	0	1900000
NAS server ( media )	89500	2	179000	0	179000
storage RED HDD (10 TB)	41000	6	246000	0	246000
AR VR kits	145,000	2	290000	0	290000
		<b>total(₹)</b>	<b>3615000</b>	<b>0</b>	<b>36,15,000</b>

**CONSUMABLES**

item	1st year(₹)	2nd year(₹)	cost(₹)
video documentation	67500	157000	224500
tutorials creation	79,000	148,000	227,000
<b>total(₹)</b>	<b>146500</b>	<b>305000</b>	<b>451500</b>

**Note:** Payment made to NITK Endowment fund is eligible for 80 G, Income tax benefit, Bank details for Electronic clearing given below.

Name of the account holder : NITK/KREC Endowment Fund

Account Number : 37481178720

Name of the Bank : State Bank of India

Branch : Surathkal, Mangalore

Address : Surathkal Branch, NITK Campus ,P.O.Srinivasanagar,DT Dakshina Kannada,575025

IFSC Code : SBIN002273 (Used for RTGS, IMPS and NEFT transactions)

SWIFT Code : SBININBB146 (Donors residing outside India can also transfer donation amount using "SWIFT" code of SBI, Mangalore SBININBB146 or through alternate means such as Internet Banking Facility)

**ONLINE :** <https://iris.nitk.ac.in/donate>







# CENTRE FOR SYSTEM DESIGN

A Centre of Excellence at NITK Surathkal

Centre for System Design (CSD) established in the year 2008, is a platform for industry - academia - society collaboration on transdisciplinary research. Experts from all disciplines contribute to the research. CSD has successfully carried out funded projects of about 33 crores funded by MHRD, DST, DHI, BRNS, DRDO, state governments and industries.



## UAV & ROV TECHNOLOGIES

Aerial Imaging - Thermal, Multispectral & 3D Mapping.  
UAV Technologies - Design, Build & Implement.  
Underwater ROV for inspection.



## SOUND AND VIBRATIONS

Dynamic Analysis and Vibration Measurements.  
Sensors and Data Acquisition.  
Actuation Systems.



## SMART MATERIAL APPLICATIONS

Material Development & Characterization.  
Application Design.



## PRODUCT DEVELOPMENT

Product Conceptualization & Design.  
Open Source Product Development.  
3D printing- Engineering & Biomedical devices.



## SYSTEMS AND NETWORKING

Network Function Virtualization.  
Protocol Design & Development.  
Internet of Things.



## EXPERIENTIAL LEARNING

Virtual & Remote Triggered labs.  
Out of Classroom projects.  
3P Labs - A Lab at learners Pace, Place & Period.



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Brand Building, Customer & Brand Perception Survey.  
Technical and Management Training Programs.  
Audio & Video Production, Documentary Creation.

# Hello!

At CSD, we DO engineering & not just READ engineering. We provide the best in-house environment for experiential learning in emerging modern technologies and a platform for engineers to realize and implement their ideas in real world.



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# NITK SURATHKAL



## R & D PROJECTS



## CONSULTANCY PROJECTS



## About Us

National Institute of Technology Karnataka (NITK), Surathkal, has established itself as one of India's top technological institutions and is recognized as an Institute of National Importance under the NIT Act 2007 by the Government of India. NITK, Surathkal is located in Mangalore City, Karnataka State, India. The Institute was established as Karnataka Regional Engineering College (KREC) in 1960, and upgraded as NITK in 2002.

NITK Surathkal offers undergraduate, postgraduate, and doctoral programs in Engineering, Science, and Management. Institute has 300+ highly qualified and dedicated faculty, 166+ committed supporting staff, 6000+ talented and motivated students, 25000+ distinguished alumni worldwide.

## Rankings

**13**  
RANK  
**NIRF Engineering**  
2020

**33**  
RANK  
**NIRF Overall**  
2020

**63**  
RANK  
**QS India**  
University Rankings

**14** Departments  
**6** Centres

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