K S INSTITUTE OF TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

A REPORT ON
SKILL DEVELOPMENT TRAINING AND PROJECT EXHIBITION"

Semester/ Section:	5th Semester / A & B
Event Type:	Technical Training & Project Exhibition
Event Name:	SKILL DEVELOPMENT TRAINING ON IOT EDGE & GATEWAY AND PROJECT EXHIBITION
Date/Duration:	26th October 2023 to 20th November2023 / 25 days 1st December 2023 / 1 Day
Industry Collaboration for training	Cranes Varsity Software
No. of Students:	128
Online link/Offline:	Offline

Event Objectives:
- An Introduction to components involved in Computation through IOT.
- Addressing and identifying various Projects using OOPs and IOT.
- Emphasizing on Practical / Physical models using IOT and implement.
- Addressing the social issues and the key points to evolve in the current Industry requirements.

Speaker Details:

Ms. Bhavani Sankari

Domain Expert, Corporate Trainer for Data Science and IoT

Expertise:

- 5+ years of Strong technical expertise in consulting and training.
- Expert in Data Science, Python, Machine Learning, Data Analysis and Visualization, Deep learning, and IoT
- 3500+ Man hours of training experience.
- Successfully trained 1000+ engineering graduates and working professionals in Linux and IoT
- Proficient in working on RaspberryPi, Arduino, Microcontrollers, IoT, Linux, and Device Drivers.
- Successful Training Delivered on
- Basic and Advanced Level Python Programming
- Python Unit Testing
- IoT Edge Node & Gateway
- Linux and device drivers etc

Kanchana H, M.Tech (Ph.D)
Domain Expert, Corporate Trainer for Embedded and VLSI Design

Professional Summary:
- Overall, 6+ Years of experience in retail & corporate training.
- Proven expertise in delivering training to diversified audiences C, C++, Python, Embedded C , Verilog HDL and FPGA Design.
- Trained 5000+ audiences from diversified groups including freshers, working professionals and corporate clients.
- More than 12,000 man-hours of training on various technologies.

Technical Skills:
- Programming Languages: C, C++, Python, Embedded C, Verilog HDL
- FPGA: Spartan-2, Spartan-3, Spartan-6, Artix-7
- Embedded protocols: UART, SPI, I2C and others

Mohsin Khan A, M.Tech (PhD)
Domain Expert, Corporate Trainer for Embedded and VLSI
- Over 14 plus years of Training & IT experience
- C, C++, Python, Embedded C, ARM Microcontroller, RTOS, MATLAB & Simulink, CAPL Scripting CANoe, Verilog/VHDL, FPGA, System Verilog, UVM.
- Demonstrated expertise in Embedded System and Automotive
- VLSI design and verification
- Programming Languages: C, C++, Python, CAPL, Embedded C, MATLAB, Verilog/VHDL, System Verilog
- 25,000+ Man hours training experience.
- Preferred trainer for EMBEDDED & VLSI.
- Trained over 2000+ engineers at Student Level and has trained over 200+ engineers at Corporate Level.
- Provided several workshops with hands-on lab sessions for various corporate training programs.

Mr. Nishanth T
Domain Expert, Corporate Trainer
Areas of expertise
- Delivered 5000+ Manhours Training
- Programming Languages: Python, Basic knowledge on c & shell scripting
- IDE: Arduino, Python DILE, spyder, Google colab and code block
- Linux OS: Ubuntu, centOS, Redhat and MacOS

Technical Skills

- Expert in Raspberry Pi Training.
- Experience in MariaDB
- Experience in C, Python, and Embedded Systems.
- IOT, Arduino Microcontroller, Embedded c & Robotics
- Red Hat Enterprise Linux, CentOS, and Ubuntu.
- Configuring the crontab to automate the tasks.
- Creating and maintaining YUM/APT/GIT repositories.
- Bash Scripting
- User administration and managing file permission and ACL.
- Setting up Web Servers (httpd).
- Experience in Configuring and Maintaining various Open-Source applications on Linux - NFS, Autofs, SCP, SFTP, httpd.

Reddyrani. N, (BTech)
Corporate Trainer for Embedded and Automotive
Professional Summary:

- Overall, 3+ Years of experience in retail & corporate training.
- Proven expertise in delivering training to diversified audiences C, Python, Embedded C , IOT, ARM.
- Trained 500+ audiences from diversified groups including freshers, working professionals and corporate clients.
- More than 5000 man-hours of training on various technologies.

Technical Skills:

- Programming Languages: C, Python, Embedded C
- Embedded protocols: UART, SPI, I2C and others

Mr. Shaik Imam
Domain Expert, Corporate Trainer
Areas of expertise

- Over 15 years of Training & IT experience
- Microprocessors, Microcontrollers, ARM, Embedded C, VLSI and IOT

Technical Skills

- Programming Languages: C, C++, ASM, Embedded C for ARM, Verilog, VHDL, System Verilog.
- Embedded System Development using high end Microcontrollers STM32.
- VLSI design and verification using Verilog/System Verilog
- Python Programming for IOT applications
- Programming in C following MISRA-C guidelines
- Programming in C++ 11/14
- 25,000+ Man hours training experience.
- Preferred trainer for Embedded and VLSI
- Trained over 2500+ engineers at Student Level and has trained over 300+ engineers at Corporate Level.
- Conducted several workshops with hands-on lab sessions for various corporate training programs.

Mr. T S Tejas
Domain Expert, Corporate Trainer
Professional Summary:

- Overall, 4 Years of experience in retail & corporate training at cranes varsity.
- Proven expertise in delivering training to diversified audiences on C.
- Trained 1000+ audiences from diversified groups including students and corporate from junior engineers to project leads.
- Handled internships at various colleges for the engineering students
- Handled corporate trainings for companies like UST GLOBAL,PCC CONTROLS
- Trusted Trainer for C Programming trainer for fresh graduates and working professionals
- Cohesive team worker, having strong analytical, problem-solving and interpersonal skills.

Technical Skills:

- Programming Languages / OS: C, Linux System Programming, and Data structures

Ms. Zaiba Afreen
Domain Expert, Corporate Trainer
Areas of expertise

- Trainer with Over 4+ Years of experience retail & corporate training at cranes varsity.
- Proven expertise in delivering training to diversified audiences on HTML, CSS, JAVASCRIPT Programming, ANGULAR JS AND MONOGO DB
- Trained 1000+ audiences from diversified groups including students and graduates and corporates
- Trusted Trainer for Web Technology, Angular Js and Mongo DB
- Cohesive team worker, having strong analytical, problem-solving and interpersonal skills.

Technical Skills

- Programming Languages   : HTML, CSS, JAVASCRIPT, ANGULAR JS AND MONGODB
- Tools used   : ANGULAR CLI TOOL
- Operating system worked on : Windows 7/8/10/11 ,Linux.
- Database   : MONGO DB

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
V SEM A SECTION PROJECT BATCH LIST				
1		1KS21CS033	HARSHITHA K M	
2		1KS21CS055	MADHU SNEHA SHREE S	
3		1KS22CS414	SOUNDARYA K S	Smart Traffic control system
4		1KS21CS016	ASHA H P	
5	Batch - 1	1KS21CS014	ARCHANA P	
1		1KS21CS017	ASHWINI	
2		1KS22CS401	ARBEENA FARHEEN	
3		1KS21CS035	HARSHITHA R	Smart Garage Door
4		1KS21CS048	KAVANA N	
5	Batch - 2	1KS21CS052	KUNAPALLI LAASYASREE	
1		1KS21CS011	AKSHAY VIVEKANANDA B	
2		1KS21CS027	DHRUTHI UMESH S	
3		1KS21CS029	GAANA S	"PET FEEDER"
4		1KS21CS034	HARSHITHA P	
5	Batch - 3	1KS21CS120	NIDHI R	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS006	ADITHI R	
2		1KS21CS007	ADITHI S REDDY	
3		1KS21CS021	CHAITRA M	CROP MONITORING AND MANAGEMENT
4		1KS21CS026	DEEPTHI A B	
5	Batch - 4	1KS21CS042	JAHNAVI P	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS050	KEERTHIKA S	
2		1KS21CS005	ABHIRAM YADATORE SHANTARAM	
3		1KS21CS054	M VAIBHAV NAYAK	CHARGE CONTROLLER
4		1KS21CS053	L.LAVANYA	
5	Batch - 5	1KS21CS119	ARJUN BHARADWAJ	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS009	AFIFAH AYESHA BIJLI	
2		1KS21CS012	ANANYA PRASAD S	
3		1KS21CS020	BHAVANA B	SMART DETECTIONS
4		1KS21CS049	KAVYA B SINGH	
5	Batch - 6	1KS21CS040	IBBANI V GOWDA	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS024	CHETHAN H	
2		1KS21CS051	KONGARA SREE SAI	
3		1KS21CS056	MANIKANTH	"SMART BUILDING "
4		1KS21CS057	MANJUNATH	
5	Batch - 7	1KS21CS047	KAUSHIK G V	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
				PROJECT TITILE
1		1KS21CS039	HRITHIKA V	
2		1KS21CS025	DARSHAN S	
3		1KS21CS022	CHARISHMA A	Smart Parking System Using IOT
4		1KS22CS411	B NAVEEN KUMAR	
5	Batch - 8	1KS21CS004	ABHIRAM K	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
				PROJECT TITILE
1		1KS21CS023	CHARISHMA M	
2		1KS21CS036	HARSHITHA S	
3		1KS21CS037	HARSHITHA S	"HOME AUTOMATION USING WEB PAGE"
4		1KS21CS001	A RAMYASREE	
5	Batch - 9	1KS22CS404	DHANALAKSHMI P	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
				PROJECT TITILE
1		1KS22CS403	ASHILESH VISHWAKARMA	
2		1KS22CS405	KIRAN B S	
3		1KS22CS408	LOGESHWARAN S	WEATHER STATION
4		1KS22CS413	SHIVA KUMAR R	
5	Batch - 10	1KS21CS028	D L SHIVANG	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
				PROJECT TITILE
1		1KS21CS003	ABHILASHA V	
2		1KS21CS038	HEMANTH KUMAR V	
3		1KS21CS031	GOPALA KRISHNA V	Smart Car Parking System
4		1KS21CS032	GURUPRASAD Y S	
5	Batch - 11	1KS21CS015	ARTHAN M GOWDA	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
				PROJECT TITILE
1		1KS21CS030	GAGAN SHIVANNA	
2		1KS21CS008	ADITYA V	
3		1KS21CS046	KARTHIK H N	Automation in Shipment Industry
4		1KS21CS043	JASHWANTH P C	
5	Batch - 12	1KS21CS018	B G PRAJWAL	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS010	AISHWARYA G	
2		1KS21CS041	IMAN GHORAI	
3		1KS21CS045	KANISHK E R	Automated Toll System
4		1KS21CS059	MAUSAM KUMAR	
5	Batch - 13	1KS21CS060	MAYA	

V SEM B SECTION PROJECT BATCH LIST

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS063	NAGADARSHAN R P	
2		1KS21CS105	SWARUP R KOWSHIK	
3	Batch - 1	1KS21CS112	VARUN SAI V	Home security system
4		1KS21CS113	VIBHA GOVIN S	
5		1KS21CS114	VIJETHA S	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS080	RAVEESH PRASAD M	
2		1KS21CS082	REDDY TEJASWINI A	
3	Batch - 2	1KS21CS089	SHEETAL NAIK	Smart Bin
4		1KS21CS107	UJWAL M L	
5		1KS22CS409	MANOHARI S	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS075	R AISHWARYA	
2		1KS21CS100	SUMEDHA R	
3	Batch - 3	1KS21CS106	TEJASHREE GOWDA Y K	Smart Density Based Traffic Light Control System
4		1KS21CS110	VANISHREE	
5		1KS21CS111	VARSHA H R	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1	Batch - 4	1KS21CS083	RUSHIKESH B	Application of Smart Automation in Kitchen
2		1KS21CS098	SRINIDHI MADHUSUDHAN	
3		1KS21CS099	SUMAN B S	
4		1KS21CS101	SUMUKHA S BHARADWAJ	
5		1KS21CS117	YASHAS D GOWDA	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1	Batch - 5	1KS21CS061	MONIKA D	Iot based wifi weather station
2		1KS21CS064	NAGASHREE A	
3		1KS21CS070	POOJA G	
4		1KS21CS071	POOJITHA M V	
5		1KS21CS088	SHAMITHA RAVISHANKAR	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1	Batch - 6	1KS21CS090	SHEETHAL G	Plant Irrigation
2		1KS21CS094	SINDHU MEGHA	
3		1KS21CS095	SKANDA KUMAR H S	
4		1KS21CS097	SOUJANYA N	
5		1KS22CS402	ARUNA G N	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1	Batch - 7	1KS21CS072	POOJITHA R	water monitoring system
2		1KS21CS078	RAKSHITHA D H	
3		1KS21CS084	RUTHU M R	
4		1KS21CS096	SNEHA S	
5		1KS21CS104	SUSHMITHA M	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS077	RAKSHITA G SATARADDI	
2		1KS21CS091	SHEETHAL R	
3	Batch - 8	1KS21CS108	V M TEJUS	Smart Medical Assistance System
4		1KS21CS109	VAISHALI BHOSLE	
5		1KS22CS416	VEDASHREE S	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS062	N VIDYASAGAR	
2		1KS21CS067	NIKHIL SAI K V	
3	Batch - 9	1KS21CS076	R HARSHA	Smart Toll Gate System
4		1KS21CS085	SAGAR S N	
5		1KS21CS093	SHREYAS C	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS22CS406	LAKSHMEESH M V	
2		1KS22CS410	MOHAMMED FAISAL	
3	Batch - 10	1KS22CS412	SAINATH A	Automatic Speed Breaker
4		1KS22CS415	SPANDANA M	
5		1KS22CS407	LAYA R	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS079	RASHMI B PHULARI	
2		1KS21CS087	SANTHOSH K A	
3	Batch - 11	1KS21CS102	SUNIDHI P	smart Garage System
4		1KS21CS115	VILAS V	
5		1KS21CS116	VISHAL KAMAN	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS068	NOOR ZAHIDA	
2		1KS21CS074	PRIYANKA V	
3	Batch - 12	1KS21CS066	NETYAM SHIVSARAN	Smart Sprout
4		1KS21CS065	NAREN RAKSHITH K V	
5		1KS21CS069	OMKAR ARJUN MAGADUM	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS103	SURESH C	
2		1KS21CS081	RAVITEJ ARJUN KAKHANDAKI	
3	Batch - 13	1KS21CS086	SAMRAT SINGH	Toll gate
4		1KS21CS092	SHOEB AHMED QUADRI	
5		1KS22CS400	ABHISHEK S	

Event description with pictures:

During the enriching internship at KSIT by Cranes Varsity, spanning from 26th October 2023 to 20thNovember 2023, students delved into a myriad of new concepts in Python and the Internet of Things (IoT). Over the course of this one-month program, their focus in Python covered a diverse range of topics, including linear search, binary search, pattern programs, object-oriented programming (OOP) concepts, nested classes, method utilization, and object creation.

Additionally in Python, students explored functions, lists, tuples, data types, decorators, dictionaries, and operator overloading. The comprehensive curriculum was reinforced by both pre-assessment and post-assessment tests, showcasing significant progress in knowledge development and problem-solving skills in Python. The internship wasn't limited to Python alone; there was a significant emphasis on IOT. Dedicated classes were conducted where each student team received an IOT devices kit.

In IOT kit each instructors elucidated the importance of each component, clarifying doubts and covering a spectrum of IOT concepts. Notable areas of focus included rotating servo motor applications, gas sensor-based smoke detection, water pumping using relays, LED illumination with ESP32, text display on LCD, soil moisture sensor for moisture content detection, applications of the RFID module and so on

To enhance practical understanding, an exhibition was organized, allowing students to showcase their IOT projects. Each team received a comprehensive IOT kit consisting of around 26 devices, and they were given 16 days of training with an additional 7-day period to develop their own IOT projects. The results were remarkable, with diverse projects ranging from Home Automation to Smart Agricultural Irrigation covering all the social sectors.

 The post-assessment tests, featuring both theoretical and skill-based questions, reflected the students' thorough understanding of the topics covered, inspiring the faculty to delve deeper into teaching advanced skills. Though challenging yet rewarding nature of the internship empowered students to think creatively and implement their newfound knowledge. This hands-on experience not only enhanced their technological prowess but also instilled a greater sense of confidence.

The positive overall experience highlights the potential for these acquired skills to be instrumental in shaping the students' future careers in the field of technology. From the excitement on day one to the culmination in the exhibition, the journey was a testament to the valuable learning experiences gained during this internship.

Bengaluru, Karnataka, India
Atlantis Liberty Square, DHAMMANAGI SUMO LEAVES, Kanakapura Rd, Raghuvanahalli,
Bangalore City Municipal Corporation Layout, Bengaluru, Karnataka 560062, India
Lat 12.878996°
Long 77.544922°
01/12/23 11:06 AM GMT +05:30

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Figures: Project Exhibition Pictures

EO#	EVENT OUTCOMES
EO1	Able to get components involved in Computation through IOT.
EO2	Able to identify various Projects using OOPs with Python and IOT.
EO3	Able to work on Practical / Physical models using IOT and implement.
EO4	Able to spotlighting the key points to evolve in the current industry requirements.

PO1: Science and engineering Knowledge
PO2: Problem Analysis
PO3: Design & Development
PO4: Investigations of Complex Problems
PO5: Modern Tool Usage
PO6: Engineer & Society
PSO1: Ability to understand, analyse problems, and implement solutions in Programming languages, as well to apply concepts in core arears of Computer science in association with professional bodies and clubs.

PO7: Environment and Sustainability
PO8: Ethics
PO9: Individual & Team Work
PO10: Communication
PO11: Project Management & Finance
PO12: Lifelong Learning
PSO2: Ability to use Computation Skills and apply software knowledge to develop effective solutions and data to address real world challenges.

EO-PO Mapping

EO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
EO1	3	2	3	2	2	2	-	-	3	3	2	2	3	3
EO2	3	3	3	2	2	2	-	-	3	3	2	2	3	3
EO3	3	3	3	2	2	2	-	-	3	3	2	2	3	3
EO4	3	2	3	2	2	2	-	-	3	3	2	2	3	3

3	Substantial (High) Correlation
2	Moderate (Medium) Correlation
1	Slight (Low) Correlation
-	No correlation.

PO's and PSO's Attained: PO1, PO2, PO3,PO4, PO5, PO6, PO9,PO10, PO11, PO12, PSO1& PSO2.

Event Coordinators

Prof. & Head, CSE

Head of the Department
Dept. of Computer Science & Engg
K.S. Institute of Technology
Bengaluru -560 109

Principal

PRINCIPAL
K.S. INSTITUTE OF TECHNOLOGY
BENGALURU - 560 109.