



### **Samsung PRISM-MoU Activities**

Samsung PRISM stands for Preparing and Inspiring Student Minds. It is a student program offering students a chance to work on real-world projects, interact with Samsung's top technical experts and provide hands-on experience in core technology domains. Samsung PRISM Signed MoU with KCT on 3<sup>rd</sup> August 2020 and collaborated with the department and identified areas of interest of Professors to collaborate with Samsung technology leaders. Mr.SenthilkumarV is identified as the single point of Contact. As part of this program, Students and Professors will form teams. Each team will be assigned a work-let\* and a mentor from SRI-B. The team will be required to deliver project in a specified timeframe and earn exciting benefits.

On 2/11/2020, Samsung Prism Online Meeting with Faculty was held in Virtual Mode. As part of this program, Samsung Prism has signed an MoU with KCT to collaborate with professors and assign problem statements in their field of interest. In addition, Samsung Prism will have a launch session for all the CSE/IT/MCA/ISE/ECE faculty on November 2nd, 2020 [Monday] at 10 a.m. to 11 a.m.

Some notable area of collaboration are as follows

- Computer Vision
- Artificial Intelligence/ Machine Learning (Voice, On-Device &Data)
- Speech Processing (Voice)
- Internet of Things
  - Image Processing (Vision- Camera)



### **Samsung Prism Worklet Details**

Samsung Prism Online Meeting with Students conducted on 12/11/2020 through Virtual Mode On 12/11/2020 (Monday), a Samsung Prism Student Meeting was held for third-year students via MS Teams. 400 students registered among all departments like CSE, IT, MCA, ECE, ISE, and EIE. This meeting was mainly conducted to have an overview of Samsung prism and student online tests for the selection process. Samsung Prism Online Tests for Worklet conducted November Virtual Mode. Allocation were on 28, 2020 through Samsung Prism Student Selection Online Tests were conducted on November 28, 2020 (Saturday) for 3rd year students. A total of 400 students registered among all departments like CSE, IT, MCA, ECE, ISE, and EIE. A total of 34 students were chosen from a pool of 300 applicants for the Samsung Prism Worklet.

## SAMSUNG PRISM PHASE I -8 Worklets Details:

S.No.	Worklet Title	Faculty Guide	Students	Duration	Status
1	K-means clustering (Shallow Learning Algorithm)	Dr.P.Devaki HoD/CSE & Dr.S.Nithyaroopa	Adithya.G/CS E, Subash/CSE, Malavika J S/CSE& Pavithra N/CSE	Feb 2021 to Augu st 2021	complete d
2	DBSCAN clustering (Shallow Learning Algorithm)	Dr.Thirumal P C /IT & Dr.V.Geetha /MCA	Shiva Sailesh K E/IT,Surya V/IT, Praveen Kumar/ECE& Aswath S/CSE	Feb 2021 to Augu st 2021	Complete
3	Agglomerative Hierarchical clustering (Shallow Learning Algorithm)	Mr. Thiruvaazhi HoD/ISE& Dr.V.Vanitha /IT	SheikHarris/I SE, Gokulakrish nanR/ISE, Pawankumar S/ISE& Udaya Raja A/ISE	Feb 2021 to August 2021	Awarded Excellent worklet
4	ElasticNet Regression (Shallow Learning Algorithm)	Mrs.S.Bharathipriya/ CSE& Mr.R.kirubakar an/CSE	Jenfero/CSE, Rohini/CSE, Kesavan/CSE & Ibrahim Kalil/CSE	Feb 2021 to August 2021	Complete dand Awarded Excellent worklet
5	Flash Glare Removal – Single image solution	Dr.Syed Ali FathimaS J/CSE & Dr.S.Rajini/CS E	Sivaram Shabari/C SE,Saran N/CSE, Guruprasath M/ISE& Jananipriya R M/CSE	Feb 2021 to August 2021	1
6	Audio Denoising_v3	Dr. W. Jai Singh/MCA& Dr. L. Dhanabal /MCA	Hariharan A /ISE& Narendrakumar D.S /ISE	Feb 2021 to August 2021	1

7	Implementation	Dr.L.Latha/	Vasanth/CS	Feb 2021	Complete
	of Scene	CSE&	E,	to August	d
	Detection using	Dr.K.R.Baskara	Arvind.B.S/	2021	
	Deep Learning	n/CSE	CSE&		
			Raajakishore		
			R/CSE		
8	Gaussian	Dr.D.Sathya	Aparna M/CSE,	Feb 2021	Complete
	Mixture	/CSE&	C.Nikhil	to August	d
	clustering	Dr.D.Chandraka	Nanthan/ISE,	2021	
	(Shallow	la /ISE	Harshavardhan		
	Learning		T/ISE &		
	Algorithm)		K.Nandhakumar		
			/ISE		

## Samsung PRISM - Phase I Outcome

- > Two worklet teams received excellent awards out of eight worklets.
  - -ElasticNet Regression (Shallow Learning Algorithm) and
  - -Agglomerative Hierarchical clustering (Shallow Learning Algorithm)
- The amount of **Rs. 1,33,600**/-received for excellent worklets from Samsung Prism to the students and faculties.
- ➤ Virtual internships certificate will be awarded to all students who participated in the worklet, and rewards will be given to those who performed very well.



Certificate of Excellence

## Excellent Rewards with Amazon vouchers worth Rs.11,100/-



### Samsung Prism Project Phase II - Launch Event

In connection a Guest Lecture on "Samsung Prism Project Phase II - Launch Event" was conducted on 30.08.2021 for the Third year students in which 152 students participated. An assessment for the student is to be conducted to choose the students with better understanding of the requirements for further collaborative events.

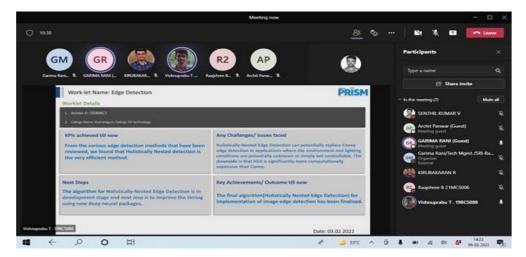
### Samsung Prism Project Phase II

Samsung Prism Project Phase II comprises of 11 real-time worklets for February – July 2022. Shortlisted students from third year CSE and M.E. CSE work on the assigned worklet under the guidance of a faculty mentor and industry mentor from SRI-B. Each team has to deliver the working solution for the problem statement with the given time frame. Periodic review and monthly assessments are conducted evaluate the progress. 58 CSE students and 30 faculty members are assigned to the Samsung Project Phase II worklets. The 11 worklets are listed below in the given table.

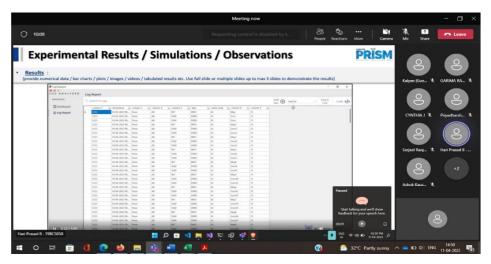
S.No.	Worklet Title	Faculty Guide	Students	Duration	Status
2	Report Generation with Image Viewer and Editor  AI, ML	Dr.P.Devaki HoD/CSE & Mrs.S.Bhara thi priya/CSE	Gokul Raam M/CSE , Jeeva/CSE, Rajheshwar V/CSE & Vishal K B/CSE	Feb 2022 to August 2022 Feb 2022	Completed
	Edge Detection	V.Senthilku mar/CSE & Mr.R.Kirub aka ran/CSE	Prabu T/CSE, Bhavika Premchand Arage/CSE, Sharat/CSE& Raajshree B/CSE	to August 2022	
3	Stress Detection for Mobile Users	Dr.V.Vanith a/IT & Dr.Rajajathi /IT	Naveen Vignesh, Prakash Kumar K& Sanjana N	March 2022 to August 2022	Completed
4	Statistical Learning based Congestion Detection and Control	Ms.D.Aswi ni/CSE & X.Francis Jency/CSE	Bothiprasaadh S P/CSEVedha smritha S/CSE Janani.P/M.E./CSE & Siva Prakash K/CSE	Feb 2022 to August 2022	Completed
5	4G Call – FOAKPI Analyzer Tool	Dr.Sudha /CSE& Ms.V.Suga nya /CSE	Keerthana/CS E, Santhiya/CSE Harish Kumar/CSE	Feb 2022 to August 2022	Completed

			Sri suvetha C S/CSE		
6	Detect user actions on devices &Monitor Performance parameters	Dr.N.Sugant hi/CSE & Dr.V.P.Su mathi/CSE	Rithik Sarvesh B/CSEB Nishanth/CSE, Azhagesh Waran & Asifa Y/IT	April 2022 to September 2022	Completed
7	Automatic Generation of Sequence Shots from Videos	Dr.L.Lath a/CSE & Dr.S.Raj ini /CSE	Jeffrin Jacob J/CSE, Jino Rohit /CSE, Tamilselvan P/IT & Sneha Manivannan/IT	Feb 2022 to August 2022	Completed
8	Wallpaper/Ima ge captioning using AI	Dr.K.R.Bas karan/CSE & Mr.P.K.Arj un/ CSE	Deekshith A/CSE, Joodith Hermmina.L /CSE, &Swathy K/IT	Feb 2022 to August 2022	Completed
9	Infra Services, Cloud Security   Fraud detection on Authentication server	Mr.G.Kanag ar aj /CSE & Dr. S.Uma Ma heswari/CS E	Varshini.S /CSE Murugappan M/CSE & Azhagesh Waran/IT	Feb 2022 to August 2022	Complete dand Awarded Excellent worklet
10	Video Text Tracking	Mr. V.Senthilku mar /CSE & Dr.SyedAlif athi ma/CSE	Sadhasivam S /CSESwetha S /CSE Janani M /CSE & Aishwarya G /CSE	March 2022 to Jan 2023	Completed
11	MsgFlow Generation and Testcase Identification Tool for 5G Debugging	Dr . P. Devaki HoD /CSE & Dr.S.Nithya roo pa /CSE	Sudharsanan M/CSE, Sarvesvaran.M.S/ CSE, Vishnuvardan J/CSE & Manavallan/CSE	Feb 2022 to August 2022	Completed

Samsung Prism conducted a monthly review (Phase II) for 9 worklets through online mode on April 11<sup>th</sup>, 2022, Monday from 11.30AM to 5.20PM. Each worklet team presented their work progress and suggestion for enhancing the scope was provided by the industry mentors. The remaining 2 worklets' monthly review was conducted on April 18th, 2022, Monday from 3PM to 5PM. The following are a few glimpses of the April Monthly Connect review.



AI|ML Edge Detection Worklet team Presentation Screenshot



Network OAM | Log Analyser Worklet team Presentation Screenshot

### **Meeting with Samsung Experts at KCT:**

- Mr. Suresh Kumar Narasimhaiah, General Manager, and Mr. Prasenjit Thakur, Deputy Manager, from Samsung Prism met with the Principal on March 31st, 2022 (Thursday), to discuss expanding Samsung Prism's scope with KCT.
- They also had an interactive session with the faculty members and students who are working on the PRISM worklets Phase II.

### • Focus on:

- ➤ Offering internships and job placements to students based on their worklet performance.
- Curriculum design and FDP.
- > Train faculty members.
- > 2 credits may be included in the curriculum during the seventh semester.
- ➤ More Excellent Worklets at the End of Phase II



Glimpses of Samsung Prism Experts' Meeting with Principal Dr. D. Saravanan.



Glimpses of Samsung Prism Experts' Meeting with Faculty members and Students

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### **Samsung Prism Project Phase III**

Samsung Prism Project Phase III comprises of 11 real-time worklets for February – Dec 2023. Shortlisted students from third year CSE and M.E. CSE work on the assigned worklet under the guidance of a faculty mentor and industry mentor from SRI-B. Each team has to deliver the working solution for the problem statement with the given time frame. Periodic review and monthly assessments are conducted evaluate the progress. 26 CSE students and 12 faculty members are assigned to the Samsung Project Phase II worklets. The 6 worklets are listed below in the given table.

## Samsung PRISM MoU Renewed for New Regulations for Next 5 Years

On April 26, 2023, Samsung PRISM signed an MoU with KCT for the next five years and collaborated with the department to identify areas of interest for professors to collaborate with Samsung technology leaders.

# Duration of Industry Problem PHASE III:Feb 2023 to Jan 2024.

S.No.	Worklet Title	Faculty Guide	Students	Duratio	Domain
1	Enable RITM for Mask Segmentation	Dr.P.Devaki HoD/CSE & Mr.V.Senthilkumar/CS E	Devasenan M/CSE ,Vishaalini/CSE, Suryaprakash P/CSE,Karan J & Saifullah N/CSE	March 2023 to Dec 2023	Area CS/ Program ming
2	Create Energy Calculation Tool forGoLang programming	Mr. Sathish.M/ISE& G.Krishnapriya /CSE	Thivya P/CSE, Subbu Lakshmi Sruthi MSR/CSE, Karthikeyank/CSE& Dhanushkumar S G/CSE	March 2023 to Dec 2023	CS/ Program ming
3	Create Energy Calculation Tool for Python programming	Dr. Rajini.S/CSE& Dr. D Chandrakala/CSE	Navina G A/ISE, Aswath V/ECE/, Sandhiya/ISE & Pranav Krishna K.S/ADS	March 2023 to Dec 2023	CS/ Program ming
4	Create Energy Calculation Tool forRUST programming	Mr.Kanagaraj.GCS E& Ms.N.Jeba/CSE	Aadhavan R/CSE Geetha A/CSE NandanaS P/CSE & Aswin KumarK/CSE	March 2023 to Dec 2023	CS/ Program ming
5	Dominant Hand and Current hand Detection	Dr.Latha.L/CSE & Dr.S.Nithya Roopa/CSE	Kavimani.S/CSE, Sindhanai Sirpy/CSEMythili Sekar Sriram/CSE & Hari Krishna Prasath S/CSE	March 2023 to Dec 2023	On- Device
6	Meme detection benchmarking on Indian data using ocr text, audio	Francis Jency X/CSE& Mr.V.Senthilkumar/CS E	Abhay Mohanan/CSE Allwin Kenneth P/CSE, Harshavardhan S V& Sudharsan R/CSE	March 2023 to Dec 2023	On- Device

## Monthly Report: Samsung PRISM Program (March 2023 -

### February 2024) Overview

Samsung PRISM (Preparing and Inspiring Student Minds) is a student program designed to provide students with opportunities to work on real-world projects under the guidance of faculty mentors, interact with Samsung's top technical experts, and gain hands-on experience in core technology domains. Phase III of the Samsung PRISM Project encompassed 7 real-time worklets from March 2023 to February 2024.

### **Participation and Execution**

Shortlisted students from the third and final years of KSI (CSE, IT, AIDS, and M.Tech Data Science) were selected to work on these worklets. Each team, under the supervision of both a faculty mentorand an industry mentor from SRI-B, was tasked with delivering a functional solution to the assigned problem statement within the stipulated timeframe.

### **Evaluation Process**

To ensure continuous progress, periodic reviews and monthly assessments were conducted. The completion of Phase III saw the evaluation of 7 real-time worklets, with virtual internship certificates awarded to participating students. An Excellence Award was presented to the standout team.

### **Excellence Award**

**Excellence Award Recipients** KSI recognizes the exceptional performance of the team comprising:

- Faculty Mentors: Francis Jency X (AP II/CSE) and Senthil Kumar V (AP II/CSE)
- Student Team Members: Abhay Mohanan (CSE), Allwin Kenneth P (CSE), Harshavardhan S V(CSE), and Sudharsan R (CSE)

The team was honored with the Excellent Worklet Award for their project titled "Meme Detection Benchmarking on Indian Data Using OCR Text and Audio." This project spanned from March 2023 to February 2024 and included a cash prize of Rs. 86,400/-.

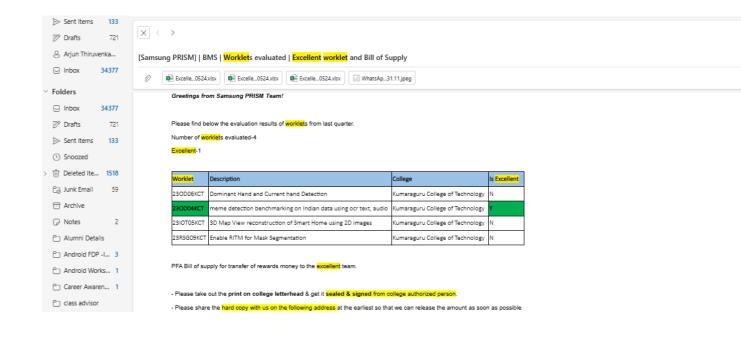


## **Acknowledgments:**

## KSI applauds the contributions of:

- 29 students who successfully completed the virtual internships.
- 13 dedicated faculty mentors who provided invaluable support and guidance.

Their innovative solutions to the 7 real-time worklet problem statements have been commendable.





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### 2024-2025

The launch of Samsung PRISM 2024 at Kumaraguru School of Innovation (KSI) on 5th November 2024 was a resounding success, engaging around 150 students from KSI (CSE, IT, AIDS, MCA, and <u>B.Sc</u>. Data Science). Held in an interactive online platform, the event showcased the opportunities and vision of Samsung PRISM, a program designed to bridge the gap between academia and industry by providing students with real-world, cutting-edge technology projects.

Dr. <u>Divya Vadlamudi</u>, Associate Director - KSI, set the stage by sharing the overview of KSI students' participation in the earlier editions of Samsung PRISM, underscoring impactful projects and the valuable growth opportunities the program has provided for students.

Mr. Vishu Kumar, Head of Samsung PRISM program, followed with an engaging presentation about the 2024 edition, introducing Worklet projects and detailing the Centers of Excellence in Communications, Vision Intelligence, Voice Intelligence, On-Device AI, IoT, and Services, along with the onboarding process.

The session has effectively equipped students with the knowledge and enthusiasm they need as they prepare for the upcoming online test on 9th November 2024, marking the beginning of exciting project opportunities within Samsung PRISM.



