

Department of Computer Science and Engineering

S_1.3.4_Dept_project

Programme name	Program Code	Name of students undertaking field projects /internships/student projects	Link to the relevant document
BE, CSE	18UCSL407	157	-
	18UCSL604	151	-
	18UCSL703	151	-

Course Title: Introductory Project
Semester:4th A
Date:22.04.2021

Course Code:18UCSL407

Batch No	USN	Name	Title of the project	Mobile No.	Supervisor
A1	2SD19CS013	AKSHATA B GANIGER(L)	Air Board	8088490235	SSV
	2SD19CS080	PRIYANKA R KHATAWATE		8431188045	
	2SD19CS034	DISHA V PANDIT		8884718433	
	2SD19CS016	AMRUTA KALABURGI		9886043076	
A2	2SD19CS033	DHEERAJ VITHALKAR(L)	UniVir A New Age Learning Platform at Your Ease	6362593889	PMPK
	2SD19CS058	MANU HEGDE		9108849591	
	2SD19CS059	MAYUR NAYAK		7338064177	
	2SD19CS015	AMIT PATIL		7019555235	
A3	2SD19CS003	ABHISHEK SAJJANAR(L)	E-Waste Management System	8296157055	AQ
	2SD19CS095	SANKET SHETTI		6363749817	
	2SD19CS009	AKASH BIRAJDAR		8624895316	
	2SD19CS093	SANDEEP B HIREGOUDAR		9538619599	
A4	2SD19CS115	SURABHI KUBER(L)	Pharmasource	7676377932	IRU
	2SD19CS107	SHRIDHAR JOSHI		7019569621	
	2SD19CS032	DARSHAN		7619125173	
	2SD19CS104	SHREYA BALLOLLI		9353991613	
A5	2SD19CS113	SUNIDHI S JAVALI(L)	Pocket Library Quick Access to Books Status	9110418431	ASP
	2SD19CS052	KRISHNA R ACHARYA		9535334951	

	2SD19CS120	VARUN V NAYAK BENGRE		8317457917	
	2SD19CS067	NISHANTH V PATIL		9686353637	
A6	2SD19CS111	SOURABH(L)	MedicoLiser	9535976550	YS
	2SD19CS048	KEERTI NAIKWAD		8123403474	
	2SD19CS054	MADHUMITA NAIK		9731869775	
	2SD19CS100	SHARATH		9148201544	
	2SD19CS101	SHIVANI BAGODI		8861890393	
A7	2SD19CS077	PRATIKA K PATIL(L)	Real Time Health Monitoring	6361482365	RRS
	2SD19CS089	RIYA N DESAI		7829728193	
	2SD19CS038	HARERAM OJHA		6299209155	
	2SD19CS053	LAHARI .P.		6363900330	
A8	2SD19CS099	SHARADHI V K(L)	SDMCET @ Ease - An App for SDMCET Students	7338222476	VU
	2SD19CS028	BHAVIKA. N		7022423502	
	2SD19CS049	KEERTI M KASALAKAR		8971868906	
	2SD19CS102	SHIVANI RAJASHEKHAR NAIK		8073587824	
A9	2SD19CS071	PAREEKSHIT G KAMAT (L)	Information Retrieval and Collection of Textual Data on Web Based Domains	8431758892	PKMK
	2SD19CS012	AKSHARA RAJARAM HEGDE		9740675036	
	2SD19CS081	PUJARI VAMSHI		9347194298	
	2SD19CS074	PRAJWAL.M.C		8861116903	
	2SD19CS073	PRADEEP A		9113263995	
A10	2SD19CS098	SHAMBHAVI A KUBASAD(L)	Empowering Employment- A portal for Skilled Manpower	9148288138	BV
	2SD19CS045	KARTIK BADIGER		9513439230	
	2SD19CS106	SHREYA HANDIGOL		9620431640	
	2SD19CS114	SUNNY KUMAR		9610270475	
A11	2SD19CS118	VAISHNAVI SATISH INDI(L)	Pharmacy Management System	9686546863	SDP
	2SD19CS117	T VISHWANATH SHETTY		9035510025	
	2SD19CS125	YASMEENFARHA HONNALI		7483728819	
	2SD19CS069	N S RACHANA		8431216720	
A12	2SD19CS083	RAKSHITA S HEGDE(L)	Clinical Appointment Booking System	8197898805	SSV
	2SD19CS086	RANJITHA F		9591657894	

		HOSMANI			
	2SD19CS090	SAIPRABHA H TIMMAPUR		9019358167	
	2SD19CS108	SHUBHADA P REVANKAR		7022958258	
A13	2SD19CS039	HIMARASHMI SHETTY(L)	An Easy Learning App for Kids With Learning Disabilities.	9769724755	GN
	2SD19CS096	SARVESH LONAKADI		9325751853	
	2SD19CS094	SANKET DUTTARAGANVI		7259185555	
	2SD19CS055	MADHURA ULLAGADDI		6366317665	
A14	2SD19CS042	JAYITRY MAJUMDER (L)	Gofert Conveyance At Your Convenience	9974963036	AN
	2SD19CS004	ABRAR KACHARI		8762912798	
	2SD19CS097	SHALINI V IYER		9538146582	
	2SD19CS051	KIRAN MALAGOND		9353644518	
A15	2SD19CS068	NIVEDITA BYADGI(L)	Vision Towards A Smart City	8277166303	RGY
	2SD19CS065	NEHA BHADRAGAUDAR		9036585369	
	2SD19CS019	ANUSHA TUPPAD		9535971022	
	2SD19CS021	ANUSHA SOMARADDI		8095913023	
	2SD19CS023	ANUSHREE KEMBHAVIMATH		9900420997	
A16	2SD19CS037	H K MANOJ(L)	An Online Platform That Connects Indian Laundry Sector Digitally	8431606725	UPK
	2SD19CS041	J UMESH		9353618145	
	2SD19CS075	PRAKASH AMMAPUR		7829184437	
	2SD19CS043	KALLAYYA HIREMATH		8867466707	
A17	2SD19CS027	ASHUTOSH SHUKLA	Handwritten Digit Recognition	9118592537	ADV
	2SD17CS119	VIRAJ PATIL		8971751468	
	2SD19CS035	DIVYANSHU RAKESH		6207320155	
	2SD17CS104	SUJAY PATIL		8310776533	



Batch No	USN	Name	Title of the project	Mobile No.	Supervisor
B1	20DP0013	NANDISH ANGADI	Public Service Monitoring System	9448416033	JCK
	20DP2043	SHIVARAJ M PUJARI		9591470049	
	20DP2062	ROHIT JADHAV		8123177665	
	20DP2048	KALKAPPA GANAGER		8970389655	
B2	2SD19CS062	NANDEESH B K	Health Record Management System Using Blockchain	8088385202	SMJ
	2SD19CS006	AFZAL AHMED PINJAR		7975578890	
	2SD19CS127	SHRINIVAS DIXIT		8317321041	
	20DP0024	SAHIL L NAIKWADI		6360529373	
B3	2SD19CS029	BHIMASEN K	Tracking System	7019690844	JVV
	2SD19CS066	NINAD		7813044396	
	2SD19CS050	KIRAN P VISHNU M		8618412769	
	2SD19CS061	MUHAMMAD A PATHAN		9686870443	
B4	2SD18CS040	HARSHA ULLIKASHI	Web Application	9731350267	RGS
	2SD18CS007	AISHWARYA.U.K		9980364980	
	2SD18CS020	ARPITA.V.K		8431414124	
	2SD18CS008	AKASH. S		9448491241	
B5	2SD19CS056	MAHIMA.B.NAIK	Planting Statistics	9606729644	SBK
	2SD19CS018	ANANYA GOUDAR		7676443652	
	2SD19CS060	MOGILLAPALLI INDHU		9347635767	
	2SD19CS005	ADITI.R.D		7899529475	
B6	2SD19CS124	VIVEK NR	AYSA Chatbot	7975792883	RGD
	2SD19CS008	AJAY NAGARAJ M		8277060822	
	2SD19CS123	VINAYAK SHETTY		9986268744	
	2SD19CS076	PRANAV R KALKERI		8431524273	
B7	2SD19CS022	ANUSHKA	Voice Assistant	9608115675	NGK
	2SD19CS036	G. SHREYAS		9916375621	
	2SD19CS112	SUMAN BASAVA		8618289272	
	2SD19CS044	KARTHIK MAHALE		8431671132	
B8	2SD19CS078	PRATIKSHA JAIN	Voice Based Email System	9008631400	VBH
	2SD19CS063	NANDITA		9113890569	

		BIRADAR			
	2SD19CS105	SHREYA ARAKERI		9535866367	
B9	2SD19CS109	SNEHA M MOGALI	Space Debris Management	8762101802	GMS
	2SD19CS103	SHRAVANI G PATIL		8296574691	
	2SD19CS079	PRAVEEN K PRAGYA		7870151090	
	2SD19CS025	ARYAN TRIVEDI		9935733559	
B10	2SD19CS072	POOJA S ANGADI	Plasma Donor	9035824931	GAR
	2SD18CS088	SANJANA SHETTY		9686387553	
	2SD19CS007	AISHWARYA K KITTUR		7259911362	
	2SD18CS066	NISHTA UDAPUDI		9740969811	
B11	2SD19CS001	ABHIJEET ANAND	Finger Print ATM	6204090820	SHN
	2SD18CS034	G. PAVANI		7019167320	
	2SD19CS092	SAMYAK JAIN		9057842325	
	2SD19CS011	AKASH V SUNAGAR		8762146940	
B12	2SD19CS020	ANUSHA JOSHI	Smart Agricultural System	7899008636	ADV
	2SD19CS085	RAMYASHRI KULKARNI		9353981076	
	2SD19CS087	RASHMI C PATIL		9141062430	
	2SD19CS047	KAVYA DUGNUR		8088015311	
B13	2SD19CS119	VARSHA M M	SDM Scholarship Portal	7259595403	RNY
	2SD19CS110	SONALI BABANAGAR		9606144599	
	2SD19CS070	PADMASHRI R PATIL		9110661629	
	2SD19CS026	ASHITA B		6362605020	
B14	2SD18CS092	SATWIK MK	Smart Garage Door	9606564845	AN
	2SD18CS075	PRASAN KUMAR A		9148638213	
	2SD18CS091	SANTOSH LAMANI		7760119160	
	2SD18CS123	VINAYAK		9686258822	
B15	2SD19CS064	NAVEEN MADIWALAR	Restaurant Menu Ordering System	8088031932	SGY
	2SD19CS002	ABHISHEK PATIL		9353768675	
	2SD19CS084	RAMESH NAYAKA		9353707558	
	2SD19CS057	MANJUNATH CHAWAN		8747884862	
B16	2SD19CS126	YOGESH MISHRA	Virtual Classroom	8630259207	IRU
	2SD19CS014	AMAN KUMAR RANA		7061293694	

	2SD19CS046	KARTIK BHAT		7051841992	
	2SD18CS115	SUMEET KASHYAP		8521946947	
B17	2SD19CS122	VINAY DESAI	AI Glasses for Blind	9632119643	VU
	2SD19CS121	VINAY		9148938148	
	20DP2037	MAHMADSABIR M B		9900590313	
	20DP2042	PRAVEEN P DONI		9731973461	
B18	2SD19CS024	ARATI HOTKER	Water Monitoring System	8088383911	RRS
	2SD19CS040	HOLAGUNDI RASHMI		9535355140	
	2SD19CS010	AKASH MUGALI		9110287915	
	2SD19CS116	SURAJ		7259647379	
B19	2SD19CS082	PUTTAYYA S H	Smart Crop Cultivation	7892624816	YS
	2SD19CS088	RITESH KULKARNI		8088331909	
	2SD19CS017	A NAGA ROHAN		9353980905	
B20	20DP2070	SHIRISHA B SUNAI	Smart Dustbin	9945997943	BV
	20DP2047	DEEPTI PATIL		9741321002	
	20DP0025	SHRUTI KADLI		8088218586	
	20DP2064	KAVITA NAIK		9483498813	



Course Title: Minor Project
Semester: 6th A

Course Code: 18UCSL604

Group ID	USNs	Names	Mobile No.	Title of the Project	Name of Guide
A1	2SD18CS024	ASHISH NARAYAN K	8088665443	Network Address Translation Process	Prof. Indira Umarji
	2SD18CS032	DHEERAJ PATIL	9741906219		
	2SD18CS041	HARSHITA BELAVAL	9900877106		
	2SD18CS100	SHREESH CHIKKERUR	9483296123		
A2	2SD16CS111	SWARAJ HEGDE	9483899421	Web and Cloud development and services	Prof. Rani R Shetty
	2SD16CS106	SUJAY PATIL	8801564833		
	2SD16CS102	SHRIPADA DESHPANDE	7829001058		

A3	2SD18CS125	ANMOL R WADIKAR	9739884931	Voice based email for blind	Prof. J C Karur
	2SD18CS027	BHARAT G T	9980073421		
	2SD18CS051	MADHU J NADAKATTIN	8105964951		
	20TR0002	Md. ISMAIL A BAGEWADI	9945746655		
A4	2SD18CS017	ANOOSHA R KOLAGAL	6362274956	SDM Digilocker	Prof. U.P.Kulkarni
	2SD18CS030	D SHRAVANI	9380705545		
	2SD16CS028	CHETANA S S	7349013088		
A5	2SD18CS132	ASMITHA TM	6361317395	Hostel Management	Prof.Ranganath Yadwad
	2SD18CS133	DEEKSHITHA R	9663510107		
	2SD18CS136	SHRAVANI	9113279869		
A6	2SD18CS063	NAVEENKUMAR PATTAR	9535295254	Design and development of GPS Vehicle Tracking & Theft Detection	Prof. Nita Kakhandaki
	2SD19CS400	ABHISHEK PUJARI	8088890486		
	2SD19CS409	SUJIT MADAPURI	8722834142		
	2SD19CS407	NAGARAJ KULKARNI	8050779290		
A7	2SD18CS058	MOHAMMED FARHAN KHAN	9380237163	Sign Language To Speech Conversation	Prof. J C Karur
	2SD18CS083	ROHAN M NAIK	9591141861		
	2SD18CS090	SANKET S LAD	7899585374		
A8	2SD18CS048	JATHIN LALAM	6303740702	Object detection using python	Prof. Ramachandranayak N Yadawad
	2SD18CS076	PRATEEK L K	7410727741		
	2SD18CS101	SHREYANSH AGARWAL	8548943941		
	2SD18CS114	SOURAV S TAMBE	7795414644		
A9	2SD18CS105	SMITA S HEGDE	9482044880		Prof. Ramachandranayak N Yadawad
	2SD18CS106	SMRUTI DESHPANDE	7975161060		
	2SD18CS129	PRABHA H B	8971665046	UBE Identification in E-mail Using Machine Learning	
	2SD18CS135	T BHARGAVI	9110465686		
A10	2SD18CS021	ARPITA MALLANAGOUDAR	8618217499	Hospital Management System	Prof. G A Radder
	2SD18CS033	DISHA BARGE	9535606594		
	2SD18CS109	SOUMYA SAGARI	6360129351		
	2SD19CS411	VAISHNAVI LOKHANDE	7829797642		
A11	2SD18CS036	Girish Patil D B	6360178528	Inventory management	Prof. Shreedhar G
	2SD18CS053	Manikantha Laxmeshwar	7760775645		

	2SD18CS064	Nikhil Durgadmath	7619532685		Yadawad
	2SD18CS073	Prajwal Chengti	6363365639		
A12	2SD18CS099	Shreekar M Shetti	9448934504	Test Bed Creation for Brain Signal Analysis	Prof. Rashmi Athanikar
	2SD18CS102	Shreyas V Achari	8618260680		
A13	2SD18CS009	Akshata Ghonthale	9740671253	Digitalization of Voting system	Prof. Smitesh D Patravali
	2SD18CS022	Arpita Arawal	9380618985		
	2SD18CS097	Shraddha J Poojari	9845781310		
	2SD18CS127	Akshita Khetan	8431918201		
A14	2SD18CS010	AKSHAY REVANKAR	9481191277	Medical and Pharmaceutical management system	Prof. Anand D Vaidya
	2SD18CS018	ANURAG SHAHI	9380651875		
	2SD18CS011	AKSHAY NAIK	8296406542		
	2SD18CS054	MANISH SAKARAY	9740270600		
A15	2SD18CS131	PRUTHVIRAJ HORADI	9448844487	IC Testing Kit using Arduino	Prof.Nita Kakhandaki
	2SD18CS047	KISHAN RAYANAL	9482935685		
	2SD18CS029	BHAVANA V KULKARNI	8296988982		
A16	2SD18CS061	NANDA INDOOR	7829588147	Image Segmentation with Machine Learning	Prof.Vidyagouri B Hemadri
	2SD18CS121	VEENA KATAKOL	9449178212		
	2SD18CS126	YASHODA TALAWAR	9620009713		
	2SD18CS134	RADHIKA M D	81971 57592		
A17	2SD17CS083	SANTOSH DHAWAN	9113577402		Prof.Sharada H N
	2SD18CS004	ABUL HASSAN SHAIKH	9380422094	Virtual classroom	
	2SD18CS085	SAHIL ALI	9538335693		
	2SD18CS093	SAURABH SAMEER	7992421374		
A18	2SD18CS014	Amruta Kamat	8310354213	Lost and Found	Dr. Vidyagauri Hemadri
	2SD18CS044	K S Aishwarya	9482919335		
	2SD18CS112	Sourabha Rajaram Hegde	7899160511		
	2SD18CS128	Monika Vyshnavi I	9449584336		
A19	2SD18CS038	Neetya Halarnkar	7972064253	College Portal	Prof.Sandhya S V
	2SD18CS031	Harshat Dhanayat	9967745003		
	2SD18CS113	Sourav Mitra	8340428010		
	2SD18CS028	Pranav Bhat	70212 93660		
A20	2SD18CS098	Shravan Upase	9845468436	Software with Hardware and Database	Prof. Ranganath Yadawad
	2SD19CS406	Mohammed Ayan Badbade	7899618097		
	2SD18CS003	ABHISHEK R	9902591947		



Group ID	USNs	Names	Mobile No.	E-mail id	Name of Guide
B1	2SD20CS400	Deepti R patil	9741321002	Smart Complaints	Prof.Basavraj v
	2SD20CS402	Kavita Naik	9483498813		
	2SD20CS410	Shruti b k	8088218586		
	2SD20CS411	Vaishnavi s s	7975796194		
	2SD20CS408	Shirisha sunai	9945997943		
B2	2SD19CS026	Ashita B	6362605020	Design and Development of Scholarship Portal	R N Yadawad
	2SD19CS070	Padmashri Ravindra Patil	9110661629		
	2SD19CS110	Sonali Babanagar	9606144599		
B3	2SD19CS002	Abhishek Patil	9353768675	Real Estate Management System	Proff. Shreedhar G Y
	2SD19CS057	Manjunath chawan	8747884862		
	2SD19CS064	Naveen Madiwalar	8088031932		
	2SD19CS084	Ramesh Nayaka	9353707558		
B4	2SD20CS404	Nandish Angadi	9448416033	PUBLIC SERVICE MONITORING SYSTEM	Dr.J.C.Karur
	2SD20CS406	Rohit Jadhav	8123177665		
	2SD20CS409	Shivaraj Pujari	9591470049		
	2SD20CS401	Kalakappa Ganiger	8970389655		
B5	2SD18CS040	HARSHA.D.ULLIKASHI	9731350267	WEB APPLICATION ON COMPANY WEBSITE	Raghavendra sir
	2SD18CS034	G.PAVANI	7019167320		
	2SD18CS008	AKASH.S	9448491241		
	2SD18CS007	AISHWARYA.k	8660970684		
B6	2SD19CS062	Nandeesh B K	7411136719	Decentralized Health Record Management System.	Dr.Shrihari M Joshi
	2SD19CS006	Afzal Ahmed Pinjar	7975578890		
	2SD19CS127	Shrinivas Dixit	8317321041		
	2SD20CS407	Sahil Naikwadi	6360529373		
B7	2SD19CS050	Kiran Poorna Vishnu M	8618412769	User friendly application for algorithmic training	Prof Rashmi A
	2SD19CS044	Karthik Mahale	8431671132		
	2SD19CS029	Bhimasen N K	7019690844		
	2SD19CS066	Ninad	7813044396		

B8	2SD19CS005	Aditi R Dudalkar	+91 76764 43652	Web Development-IEEE SDM Student Branch Website.	Prof. Indira Umarji
	2SD19CS018	Ananya Goudar	+91 78995 29475		
	2SD19CS056	Mahima B Naik	+91 9606729644		
	2SD19CS060	Mogillapalli Indhu	+91 93476 35767		
B9	2SD19CS001	Abhijeet Anand	6204090820	Travel planner	Prof. Basavara j vaddatti
	2SD19CS092	Samyak Jain	9057842325		
	2SD19CS126	Yogesh Mishra	8630259207		
	2SD19CS014	Aman Kumar Rana	7061293694		
B10	2SD19CS121	Vinay	9148938148	Skill Labour Managemet System.	Vidya Uttur
	2SD19CS122	Vinay desai	9632119643		
	2SD20CS403	MahmadSabir Badami	9900590313		
	2SD19CS017	Naga Rohan	9353980905		
B11	2SD19CS026	Ashita B	6362605020	Design and Development of Scholarship Portal	Dr. RNY
	2SD19CS110	Sonali Babanagar	9606144599		
	2SD19CS070	Padmashri Ravindra patil	9110661629		
	2SD19CS119	Varsha M Marekkanavar	7259595403		
B12	2SD19CS022	ANUSHKA	9608115675	App on Department Project Maintainance System	Prof. Anand Vaidya
	2SD19CS036	G. SHREYAS	9916375631		
	2SD19CS082	PUTTAYYA S HAVERIMATH	8618289272		
	2SD19CS112	SUMAN BASAVA	7892624816		
B13	2SD19CS024	Arati Hotker	+91 80883 83911	Handwritten mathematical expression Recognition	Sharadha H.N
	2SD19CS040	Holagundi Rashmi	+91 95353 55140		
	2SD19CS010	Akash Mugali	+91 9110287915		
	2SD19CS116	Suraj	+91 7259647379		
B14	2SD18CS066	Nishta Udupudi	9740969811	Development of snake game program using object oriented programming	Raghave ndra G S
	2SD19CS007	Aishwarya K Kittur	7259911362		
	2SD19CS072	Pooja S Angadi	9035824931		
	2SD18CS088	Sanjana Shetty	9686387553		
B15	2SD19CS020	Anusha Joshi	7899008636	Resume Builder	Dr. Vidya H
	2SD19CS047	Kavya D	8088015311		
	2SD19CS085	Ramyashri Kulkarni	9353981076		
	2SD19CS087	Rashmi C Patil	9141062430		
B16	2SD19CS046	Kartik Bhat	7051841992	Prediction of Cardio Vascular disease	Prof. Rashmi Athanika
	2SD19CS063	Nandita Biradar	9113890569		

		Pratiksha Jain			r
	2SD19CS078	Pratiksha Jain	9008631400		
	2SD19CS105	Shreya Arakeri	9535866367		
B17	2SD19CS061	Muhammad Adnankhan Pathan	9686870443	Tracking System.	Ravindra Dastikop
	2SD19CS011	Akash Sunagar	8762146940		
B18	2SD19CS109	Sneha Mogali	8762101802	Design and Implementation of Image Retrival using DCNN.	Prof.Rani R Shetty
	2SD19CS105	Shravani Patil	+91 82965 74691		
	2SD19CS079	Praveen Kishor Pragya	+91 78701 51090		
	2SD19CS025	Aryan Trivedi	+91 99357 33559		
B19	2SD19CS124	VIVEK NR	7975792883	Speech Emotion Detection System.	Prof.Ana nd Vaidya
	2SD19CS123	VINAYAK SHETTY	8431524273		
	2SD19CS076	PRANAV R K	9986268744		
	2SD19CS008	AJAY N	8277060822		
B20	2SD18CS075	Prasankumar	9148638213	Image Processing	Dr. Archana N
	2SD18CS123	Vinayak	9686258822		
	2SD18CS092	Satwik	9606564845		
	2SD18CS091	Santosh	7760119160		



Course Title: Major Project Phase-1 & Phase-2
Semester:8th A
Date:23.04.2021

Course Code:18UCSL407

Group ID	USNs	Names	Mobile No.	Title of the project	Guide
A1	2SD18CS024	Ashish Narayan K	8088665443	Design and Implementation of Efficient Self Configurable Protocol for Visual Sensor Network	Prof. Indira Umarji
	2SD18CS032	Dheeraj V Patil	9741906219		
	2SD18CS041	Harshita Belaval	9900877106		
	2SD18CS100	Shreesh R Chikkerur	9483296123		
A2	2SD18CS407	Manjunath J Myageri	9632664756		
A3	2SD18CS027	Bharat Giridhar Tatti	9980073421	Real Time Configuration Management System	Dr. J C Karur
	2SD18CS051	Madhu J N	8105964951		
	2SD18CS125	Anmol R Wadikar	9739884931		
	2SD19CS412	Md Ismail Bagewadi	9945746655		
A4	2SD18CS132	Asmitha TM	6361317395	Smart Refrigerator	Prof. Ranganath Yadawad
	2SD18CS133	Deekshitha R	9663510107		
	2SD18CS136	T Shravani	9113279869		
A5	2SD18CS017	Anoosha R Kolagal	6362274956	Alagulimane:A Two player Strategy Board Game	Prof. Govind N
	2SD18CS030	D Shravani	9380705545		
	2SD18CS112	Sourabha Rajaram Hegde	7899160511		
	2SD18CS128	Monika Vyshnavi I	9449584336		
A6	2SD18CS021	Arpita R Mallanagoudar	8618217499	On Road vehicle breakdown assistance app	Prof. G. A. Radder
	2SD18CS033	Disha Barge	9535606594		
	2SD18CS109	Soumya Sagari	6360129351		
	2SD18CS134	Radhika M D	8197157592		
A7	2SD18CS083	Rohan Maruti Naik	9591141861	Sign Language to Speech Conversion	Dr. Shivanagowda G M
	2SD18CS090	Sanket S Lad	7899585374		

	2SD18CS058	Farhan Khan	9380237163		
A8	2SD18CS014	Amruta Vishnu Kamat	8310354213	IOT based greenhouse monitoring system	Prof.Govind N
	2SD18CS044	K S Aishwarya	9482919335		
	2SD16CS028	Chetana S	7349013088		
A9	2SD18CS009	Akshata Ghonthale	9740671253	Sentimental Analysis of covid-19 tweets using Machine learning	Prof.Smitesh D. Patravali
	2SD18CS022	Arpita Arawal	9380618985		
	2SD18CS097	Shraddha Poojari	9845781310		
	2SD18CS127	Akshita Khetan	8431918201		
A10	2SD18CS011	Akshay Naik	8296406542	INTELLIGENT VEHICLE ACCIDENT DETECTION AND ALERT SYSTEM USING RASPBERRY PI	Prof. Nita G K
	2SD19CS400	Abhishek Pujari	8088890486		
	2SD19CS407	Nagaraj Kulkarni	8050779290		
	2SD19CS409	Sujit Madapuri	8722834142		
A11	2SD18CS036	Girish Patil D B	7619119608	AI CHAT BOT	Prof. Shreedhar G Yadwad
	2SD18CS053	Manikantha L	7760775645		
	2SD18CS064	Nikhil R D	7619532685		
	2SD18CS073	Prajwal Chengti	8762505072		
A12	2SD18CS048	Jathin Lalam	6303740702	Video Streaming Platform	Dr. Ramachandr anayak N Yadwad
	2SD18CS063	Naveen kumar	9535295244		
	2SD18CS101	Shreyansh Agarwal	8548943941		
	2SD18CS114	Sourav S Tambe	7795414644		
A13	2SD17CS083	Santosh Dhawan	9113577402	Smart Surveillance System	Dr. Archana N
	2SD18CS085	Sahil S Ali	9538335693		
	2SD18CS093	Saurabh Sameer	7992421374		
A14	2SD19CS406	Mohammedayan	7899618097	Charity application	Prof. Ranganath Yadwad
	2SD18CS098	Shravan Upase	9845468436		
	2SD18CS003	Abhishek R	9902591947		
	2SD18CS029	Bhavana V Kulkarni	8296988982		
A15	2SD18CS018	Anurag Shahi	9918818099	Exotic Food and place- Web development	Prof.Nita Khakandki
	2SD18CS047	Kishan Rayanal	9482935685		

	2SD18CS131	Pruthviraj Horadi	9448844487		
A16	2SD18CS099	Shreekar M Shetti	9448934504	Sentiment Analysis using Brain Signals	Prof. Rashmi R Athanikar
	2SD18CS102	Shreyas V Achari	8618260680		
A17	2SD18CS105	Smita S Hegde	9380926740		Dr. Ramachandra.N.Yadav
	2SD18CS106	Smruti Deshpande	7975161060	Online Book Store	
	2SD18CS129	Prabha H B	8971665046		
	2SD18CS135	T Bhargavi	9110465686		
A18	2SD18CS004	Abul Hassan Shaikh	9380422094	Aerial Surveillance	Dr. Archana N
	2SD18CS010	Akshay Revankar	9481191277		
	2SD18CS054	Manish Sakaray	9740270600		
	2SD18CS076	Prateek Lokesh Kumbar	7410727741		
A19	2SD18CS028	Pranav Bhat	7021293660	Education Management System	Prof Sandhya S V
	2SD18CS031	Harshat D	9967745003		
	2SD18CS038	Neetya Halarnkar	7972064253		
	2SD18CS113	Sourav Mitra	8340428010		
A20	2SD18CS061	Nanda Indoor	78295 88147	online Doctor Appoinment App	Dr.Vidyagouri B Hemadri
	2SD18CS121	Veena Katakol	94491 78212		
	2SD18CS126	Yashoda Talawar	96200 09713		



Group ID	USNs	Names	Mobile No.	Email id	Name of Guide
B1	2SD17CS052	NIKHIL ARVIND ELIGAR	9591487924	sentiment analysis using Machine learning	DR.A.A.QAZI
	2SD17CS027	GOUTAM TERDAL	9110864249		
	2SD17CS097	Sohan K	9110864573		
B2	2SD18CS005	Adithi N Prabhu	9483386152	Hostel Room Allocation System	Prof. Indira

	2SD18CS081	Ramya G Ashrit	9148450489		Umarji
	2SD18CS104	Sidharth	9511551106		
	2SD18CS107	Snehal R Majannavar	6362035867		
B3	2SD18CS043	Jay Kumar Jha	9354484360	The Bamboo Shop	Prof.Anand S Pashupathimath
	2SD18CS060	Mukesh Kumar	8696995028		
	2SD18CS070	Priyanka Prabhu	8669861974		
	2SD18CS072	Pradum Kumar	6201489636		
B4	2SD18CS012	Amol Sadanand Telang	8660791126	Luggage Space - An WebApp dedicated to (Travelers) who will be exploring the particular city for a shorter period.	Prof. Rashmi Athanikar
	2SD18CS084	Sahil Rajeev Naik	8197352638		
B5	2SD18CS023	Ashish Kalghatkar	9035275501	Navigation System using Location Based Augmented Reality	Dr. S. B. Kulkarni
	2SD18CS086	Sandeep B	9036259832		
	2SD18CS089	Sankalp Malagi	8217636518		
	2SD19CS410	Vagesh Umesh Naik	8722492883		
B6	2SD18CS049	LAVANYA M PANDIT	6361954712	Handwritten Text Recognition using Python	Prof. Indira Umarji
	2SD18CS056	MEGHA SATISH SHET	9380262434		
	2SD18CS103	SHRIRAKSHA B MALAGANNAVAR	9980584753		
	2SD18CS120	VARSHINI D BHAT	8762846099		
B7	2SD18CS026	BHAGYASHRI G BHAT	9380748378	Remote System Functions Monitoring	Prof.Anand S Pashupatimath
	2SD18CS057	MISBA N SAWAR	7411903304		
	2SD18CS074	PRARTHANA R NAYAK	8073047415		
	2SD18CS080	RAKSHA UDUPI	6363746021		
B8	2SD18CS035	GAURAV KUMAR	8919692250	BlueChat (Bluetooth Chating application)	Dr. S.M Joshi
	2SD18CS046	KASHIS AGARWAL	7739557646		
	2SD18CS055	MARUTI NANDAN	9431314105		
	2SD18CS095	SHASHANK RAJ	7004852127		
B9	2SD16CS102	SRIPAD DESHPANDE	7829001058	Healthcare System using Machine Learning	Prof. Rani Shetty
	2SD16CS104	SUDARSHAN NIRWANI	8892868488		

	2SD16CS106	SUJAY PATIL	8801564833		
	2SD16CS111	SWARAJ HEGDE	9483899421		
B10	2SD18CS025	ASHWINI RATHOD	7019155674	News Application	Prof. Basavaraj Vaddatti
	2SD18CS039	HARSHA C KOTTUR	7676865413		
	2SD18CS067	PARMEET SINGH	7897567114		
	2SD19CS402	AJAY G HABIB	8867309377		
B11	2SD18CS006	Aishwarya S Salunke	8296082787	Image Caption Generator	Prof Sandhya S V
	2SD18CS019	Apoorva Pai	9686285472		
	2SD18CS117	Tejaswini P Angadi	9035572948		
	2SD18CS118	Usha Nandini V	9380484409		
B12	2SD18CS062	Narasimha Kulkarni	9380547512	Fashion Mnist with Keras, tensorflow and deep learning of cloth classification	Dr. S.M. Joshi
	2SD18CS065	Niraj Kumar Singh	7488217339		
	2SD18CS077	Praveen Kumar	7219914393		
	2SD18CS111	Sourabh Gadad	7090135752		
B13	2SD18CS013	Amrut G Solanki	7337600973	Prediction of Money lending, financing and pigmy system	Dr. S B Kulkarni
	2SD18CS078	Priya Maruti Ghatakamble	8197115840		
	2SD18CS116	Tejashwini	7022847988		
	2SD18CS122	Vikas Nagmoti	9060002808		
B14	2SD18CS037	Gurudev S Panchal	7899543114	Blockchain based Chit Fund System	Dr.Vidyagowri Hemadri
	2SD18CS042	Iranna Yavagal	9448471331		
	2SD18CS096	Shilpa M Siddeshwar	8660671718		
	2SD18CS110	Soumya Badiger	7899217982		
B15	2SD18CS002	Abhishek Kulkarni	8095352532	Department Project Maintenance System	Prof. Anand D Vaidya
	2SD18CS045	Kartik S Betageri	9482014620		
	2SD18CS108	Somashekar B	8904302607		
	2SD18CS124	Vishal Meti	9902638798		
B16	2SD18CS069	POOJA S CHANDAVAR	9980710873	She Support(H)er	Prof. Yashoda S
	2SD19CS401	ADITI .K. NAIK	81520 38260		
	2SD19CS403	APOORVA MULMUTTAL	86187 28017		
	2SD19CS405	BABITA NARAGUND	73495 81169		
B17	2SD18CS119	VAIBHAV NAYAK	7899249720	Biometric Laboratory attendance system	Prof Rani.R.Shetty

	2SD18CS050	M S SAGAR	7483186057		
	2SD18CS082	RAUNAK VERMA	9986090674		
	2SD18CS094	SHARATH S THIMMANAGOUDAR	6362668109		
B18	2SD16CS069	Rahul Raichur	7349529266	Early detection of Alzheimer's disease using machine learning.	Dr. Raghendra G.S.
	2SD16CS101	Srinivas Miskin	9481789860		
	2SD16CS123	Vedanth Reddy	8792460488		
	2SD17CS002	Abhishek Matti	8310185935		
B19	2SD17CS012	Ayesha shekh	7975733685	Smart parking system for educational institution	Dr.Raghendra G.S
	2SD17CS055	Omkar Pattanshetti	8861514112		
	2SD17CS078	Sahana Mahendra	9113968744		
	2SD17CS106	Supreet Gokarn	7204912353		
B20	2SD15CS051	Mayur M	6361746657	3D Scanning using Photogrammetry	Prof.Jayateerth Vadavi
	2SD16CS085	Sharavan Hiremath	7019413957		
	2SD18CS071	Pradeep M Doddamani	7204314124		
	2SD18CS087	Sandesh Kulkarni	9380855820		
B21	2SD18CS059	Mohammed Usman E Gani	8088611415	Design and Implementation of automatic system to reduce bandwidth usage in real time video conferencing tool	Prof. Umakant P Kulkarni
	2SD18CS130	S Varun	9483712819		
	2SD18CS015	Ananth Dayakar Hegde	8277394032		
	2SD18CS016	Ankit Anand	6205066814		



1.3.4.1 Number of students undertaking Student Projects					
Programme Name	Programme Code	Name of the Student	Title of Project	Guide Name	Link
Computer Science & Engineering	CSE	Amarnath Swami 2SD20SCS01	Video Stream processing using surveillance Camera	Dr. U P Kulkarni	
Computer Science & Engineering	CSE	Asma Mahabubasab Hebbal 2SD20SCS02	Content Based Image Retrieval using Deep Learning.	Dr. J C Karur	
Computer Science & Engineering	CSE	Aziza Khalilahmed Shaikh 2SD20SCS03	Attack and anomaly detection in IoT sensors in IoT sites using machine learning approaches	Prof. Govind. N	
Computer Science & Engineering	CSE	Bibisadiqa M Dakhani 2SD20SCS04	Text summarization using machine learning algorithm.	Dr. Vidyagouri H	
Computer Science & Engineering	CSE	G Nikhitha 2SD20SCS05	Vehicle Accident Detection and Rescue Information System using IOT	Prof. Nita G.K	
Computer Science & Engineering	CSE	Keerti Ghodke 2SD20SCS06	Stream processing for association rule to generate student data set using Apriori algorithm	Prof. Rashmi.A	
Computer Science & Engineering	CSE	Sanjeevini Nasi 2SD20SCS07	Mathematical expression recognition using CNN and Exception	Prof. Sharada H.N	
Computer Science & Engineering	CSE	Sumita Guddin 2SD20SCS08	A Stream processing for efficient gaussian tree method for concept drift data stream	Dr. R. N. Yadawad	
Computer Science & Engineering	CSE	Tunga M 2SD20SCS09	Real time security system using Human motion detection	Prof. Rani R.Shetty	



**SDM COLLEGE OF ENGINEERING AND TECHNOLOGY,
DHARWAD-580002**

(An autonomous Institution affiliated to VTU, Belagavi – 590018)



Department of Computer Science Engineering

CERTIFICATE

Certified that this report on the project entitled **“Offline Handwritten Mathematical Expression Recognition Using CNN And Xception”** is a bonafide work presented by Ms Sanjeevini Nasi of the student (2SD20SCS07) student of 4th semester M.Tech, Department of Computer Science Engineering, SDM College of Engineering and Technology, Dharwad, for the partial fulfilment of the requirements for the completion of second-year M.Tech course, during the academic year 2021-22. The report has been thoroughly reviewed and it is approved that the report satisfies the necessary academic requirements prescribed for the said course.

Sharada HN
18/7/22
Signature of the Guide
Sharada H N

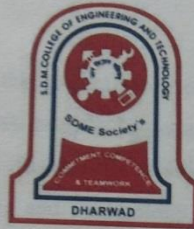
S M Joshi
Signature of the HOD
Dr S M Joshi

Dr K. Gopinath
Signature of the Principal
Dr K. Gopinath

	Examiner I	Examiner II
Signature with date:	<i>the</i>	<i>Poornima 29/2/22</i>
Name:	<i>Sharada HN</i>	<i>Mrs. Poornima Raibal</i>

**SDM COLLEGE OF ENGINEERING AND TECHNOLOGY,
DHARWAD-580002**


(An autonomous Institution affiliated to VTU, Belagavi – 590018)

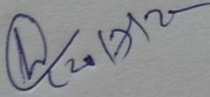


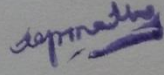
Department of Computer Science and Engineering


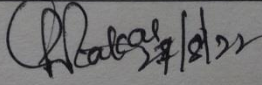
CERTIFICATE

Certified that this report on the project entitled “Text Summarization Using Machine Learning Algorithm” is a bonafide work presented by Miss. Bibi Sadiqa M D (2SD20SCS04) student of 4th semester M.Tech, Department of Computer Science and Engineering, SDM College of Engineering and Technology, Dharwad, for the partial fulfilment of the requirements for the completion of second year M.Tech course during the academic year 2021-22. The report has been thoroughly reviewed and it is approved that the report satisfies the necessary academic requirements prescribed for the said course.

 20/07/2022
Signature of the Guide
Dr. Vidyagouri B H


Signature of the HOD
Dr. S.M. Joshi


Signature of the Principal
Dr. K. Gopinath

	Examiner I	Examiner II
Signature with date:	 27/8/22	 27/8/22
Name:	Vidyaagauri B H	Mrs. Pannime R

**SDM COLLEGE OF ENGINEERING AND TECHNOLOGY,
DHARWAD-580002**

(An autonomous Institution affiliated to VTU, Belagavi – 590018)



Department of Computer Science and Engineering

CERTIFICATE

Certified that this report on the project entitled “Content Based Image Retrieval Using Deep Learning” is a bonafide work presented by Mrs.Asma Mahabubasab Hebbal(2SD20SCS02) student of 4th-semester M.Tech, Department of Computer Science and Engineering, SDM College of Engineering and Technology, Dharwad, for the partial fulfilment of the requirements for the completion of second year M.Tech course during the academic year 2021-22. The report has been thoroughly reviewed and it is approved that the report satisfies the necessary academic requirements prescribed for the said course.

[Signature]
Signature of the Guide
Dr.J C Karur

[Signature]
Signature of the HOD
Dr.S.M.Joshi

[Signature]
Signature of the Principal
Dr. K.Gopinath

	Examiner I	Examiner II
Signature with date:	<i>[Signature]</i> 27/12/22	<i>[Signature]</i> 27/12/22
Name:	Dr. J. C. Karur	Mrs. Poornima K

Course Learning Objectives (CLOs):

Objective of this course is to make student knowledge-full enough to determine when an AI approach is appropriate for a given problem, identify the appropriate representation, reasoning mechanism, models, algorithms, implement and evaluate it.

Course Outcomes (COs):

CO	Description of the Course Outcome: At the end of the course, the student will be able to:	Mapping to POs and PSOs supported by appropriate evidences shown in Performance Ensuring Measures-PEM		
		Substantial 3	Moderate 2	Low 1
CO-1	Understand the world, behavior of agents and problem solving aspects of agents [Familiarity-BL-2].	-	3,4	-
CO-2	Demonstrate the representation and usage of knowledge using First order logic. [Usage- BL-3]	-	3,4	-
CO-3	Understand the decision making process even with incomplete, inconsistent and ever changing facts [Usage BL-3].	-	3,4	-
CO-4	Understand the strengths and weaknesses of many popular machine learning approaches with awareness to SVM and Neural Networks in machine learning [Familiarity BL-2]	-	3,4	-
CO-5	Understand and apply unsupervised algorithms for clustering, able to interpret appropriateness of among the three learning styles and performance of a simple learning system on a real-world dataset. [Assessment BL-4]	-	3,4,5	-

Note: BL- Bloom's Level

Mapping Level:

POs/ PSOs	1	2	3	4	5	6
Mapping Level	-	-	2	2	2	-

Prerequisites: Knowledge of Logic, Discrete Mathematic, Programming fundamentals.

Course Contents:

Unit	Contents	Performance Ensuring Measures- PEM [Hours/ Course Outcomes/ Scope of Internal Assessments/ Assessment Tools / Evidences]				
		Durations in Hours		Course Outcomes	IAs	Assessment Tools: Class Test, Written Test, Quiz, Programming based assignments, Group activity/ Course Project, Peer Learning & Training from Industry experts.
		Theory	Practice			
1.	What is AI (Artificial Intelligence)? : The AI Problems, The Underlying Assumption, What are AI Techniques, The Level Of The Model, Criteria For Success, Some General References, One Final Word Problems, State Space Search & Heuristic Search Techniques: Defining The Problems As A State Space Search, Production Systems, Production Characteristics, Production System Characteristics, And Issues In The Design Of Search Programs, Additional Problems. Generate And-Test, Hill Climbing, Best-First Search, Problem Reduction, Constraint Satisfaction, Means Ends Analysis.	10	-	CO-1	1	<p>1. Written test- CIE / SEE. (CO-1)</p> <p>2. One Research paper study (CO-1 to 5)</p>
2.	Knowledge Representation Issues: Representations And Mappings, Approaches To Knowledge Representation. Using Predicate Logic: Representation Simple Facts In Logic, Representing Instance And Isa Relationships, Computable Functions And Predicates, Resolution. Representing Knowledge Using Rules: Procedural Versus Declarative	10	-	CO-2		<p>1. Written test- CIE/SEE. (CO-2)</p> <p>2. Associated Lab Works</p>

	Knowledge, Logic Programming, Forward Versus Backward Reasoning.					
3.	Symbolic Reasoning Under Uncertainty: Introduction To Non monotonic Reasoning, Logics For Non-monotonic Reasoning. Statistical Reasoning: Probability and Bays' Theorem, Certainty Factors And Rule-Base Systems, Bayesian Networks, Dempster Shafer Theory,	10	-	CO-3	2	1. Written test – CIE / SEE.- (CO-3)
4.	Introduction to Statistical Decision Theory - Regression, Classification, Bias Variance Linear Regression, Multivariate Regression, Subset Selection, logistic regression Linear Models for Classification, Decision Trees, Regression Trees.	11	-	CO-4	2,3	1. Written test- CIE / SEE.- (CO-4) 2. Associated Lab Works
5.	Perceptron, Support Vector Machines, Neural Networks - Introduction, Early Models, Perceptron Learning, Backpropagation, Initialization, Training & Validation, Parameter Estimation - MLE, MAP, Bayesian Estimation Unsupervised learning and clustering – k-means clustering, hierarchical clustering	11	-	CO-4,5	3	1. Written test- CIE / SEE.- (CO-4 & 5) 2. Associated Lab Works

Note: CTA: Course Teacher's Assessment, CIE: Continuous Internal Evaluation, SEE: Semester End Examination. Procedure for conduction of IAs and SEE will be notified by the office of the Dean academic program and is common to all courses and programs.

Reference Books:

1. Elaine Rich and Kevin Knight “Artificial Intelligence”, 2nd Edition, Tata Mcgraw-Hill, 2005.
2. Stuart Russel and Peter Norvig, “Artificial Intelligence: A Modern Approach”, 3rd Edition, Prentice Hall, 2009.
3. The Elements of Statistical Learning, by Trevor Hastie, Robert Tibshirani, Jerome H. Friedman (freely available online)
4. Pattern Recognition and Machine Learning, by Christopher Bishop (optional)
5. Mitchell Tom, Machine Learning. McGraw Hill, 1997.

20PCSEE125 Image Processing and Computer vision (3-0-2) 4

Contact Hours: 39L+26P

Course Learning Objectives

This course focuses on basic principles of digital image processing and computer vision to implement solutions for image processing problems.

Course Outcomes:

Description of the Course Outcome: At the end of the course the student will be able to:		Mapping to POs/ PSOs supported by appropriate evidences shown in Performance Ensuring Measures-PEM		
		Substantial Level (3)	Moderate Level (2)	Low Level (1)
CO-1	Explain and analyze the principles of Digital Image Processing with image sensing and acquisition techniques, Image formation, image representation. [Familiarity] [BL-2]	-	3,4	1
CO-2	Apply morphological operations on given image. [Usage] [BL-3]	3	4	1
CO-3	Apply image representation techniques for shape recognition .[Usage] [BL-3]	4	-	-
CO-4	Apply segmentation techniques for computer vision. [Usage] [BL-3]	3	4	-
CO-5	Apply Hough Transform for line, circle, and ellipse detections using 3D vision techniques .[Usage] [BL-3]	3	2	5,6

Note: BL- Bloom's Level

Mapping Level

POs	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6
Mapping Level	1	2	2.75	2.25	1	1

Pre-requisites: Knowledge of: Basics of statistics, Linear Algebra, computer graphics

Course Contents:

Unit	Contents	Performance Ensuring Measures- PEM [Hours/ Course Outcomes/ Scope of Internal Assessments/ Assessment Tools / Evidences]				
		Durations in Hours		Course Outcomes	IAs	Assessment Tools: Class Test, Written Test, Quiz, Programming based assignments, Group activity/ Course Project, Peer Learning & Training from Industry experts.
		Theory	Practice			
1	The Image, its mathematical and physical background: Overview, Linear integral transforms, Image formation physics. Image Pre-processing: Pixel brightness Transformations, Geometric transformations, Local Pre-processing, Image restoration.	8	-	CO-1	1	1. Written test- CIE / SEE. (CO-1)
2	Mathematical Morphological: Preliminaries, Dilation and Erosion, Opening and Closing, The Hit-or-Miss Transformation, Some Basic Morphological Algorithms	6	2	CO-2	1, 2	1. Written test- CIE/SEE. (CO-2) 2. CTA- Implementation of morphological operations on given application -(CO-2)
3	Representation and description: Representation, Boundary descriptors, Regional descriptors, Using PCA for description. Shape representation and description: Region identification, Contour-based shape representation and description, Region-based shape representation and description. Texture: Statistical texture description, Synthetic texture description, Hybrid texture description methods.	6	2	CO-3	2 2	1. Written test – CIE / SEE.- (CO-3) 2. CTA- Implementation of shape, texture descriptors on given application -(CO-3)

4	Segmentation: Thresholding, Edge-based segmentation, Region-based segmentation, Matching, Mean Shift Segmentation, Active Contour model. The Hough Transform, Fitting Lines, Fitting Curves, Fitting as a Probabilistic Inference Problem, Robustness, Segmentation and Fitting Using Probabilistic Methods: Missing Data Problems, Fitting, and Segmentation, The EM Algorithm in Practice, Tracking With Linear Dynamic Models: Tracking as an Abstract Inference Problem, Linear Dynamic Models, Kalman Filtering, Data Association, Applications and Examples.	6	2	CO-4	2 2, 3 3	1. Written test- CIE / SEE.- (CO-4) 2. CTA- Implementation of segmentation on given application -(CO-4)
5	The Geometry of Multiple Views: Two Views, Stereopsis: Reconstruction, Human Stereopsis, Binocular Fusion, Using More Cameras, Segmentation by Clustering: What Is Segmentation? Human Vision: Grouping and Gestalt, Applications: Shot Boundary Detection and Background Subtraction, Image Segmentation by Clustering Pixels, Segmentation by Graph-Theoretic Clustering.	6	2	CO-5	3 3	1. Written test- CIE / SEE.-(CO-5)
<p style="text-align: center;">Other performance ensuring measures</p> <p>CTA includes implementation (80%) and 20% other performance measures like any one of the following:</p> <p>Total weightage=implementation -16Marks + PEM-4Marks =20 Marks.</p> <p>Like Industrial Visits, Course Projects, Implementation based assignments. Survey & Presentation, Certification, Conducting workshops/training programs, paper presentation, hobby projects, any engineering solutions for societal problems, Participation in relevant conference/training program/workshops etc...</p>						<p>CTA: Implementation of an algorithm for a given problem scenario.</p> <p>(CO-2,3,4)</p>

Note: CTA: Course Teacher’s Assessment, CIE: Continuous Internal Evaluation, SEE: Semester End Examination. Procedure for conduction of IAs and SEE will be notified by the office of the Dean academic program and is common to all courses and programs.

List of Laboratory Assignments:

1. Point processing in spatial domain
 - a. Negation of an image
 - b. Thresholding of an image
 - c. contrast Stretching of an image
2. Bit Plane Slicing
3. Histogram Equalization
4. Histogram Specifications
5. Zooming by interpolation and replication
6. Filtering in spatial domain
 - a. Low Pass Filtering
 - b. High Pass Filtering
 - c. Median filtering
7. Hit-or-Miss Transformation
8. Object Recognition: based on decision theoretic methods, Structural recognition
9. Experiment on Edge detection Algorithm
10. Experiment on Linear Filters
11. Experiment on Segmentation
12. Experiment on Geometry

Reference Books:

1. Rafael C Gonzalez and Richard E. Woods: Digital Image Processing, Pearson Publication, 4th Edition 2017
2. A. K. Jain: Fundamentals of Digital Image Processing, Pearson, 2004.
3. Milan Sonka, Vaclav Hlavac and Roger Boyle, "Image Processing, Analysis and Machine Vision", 2nd Edition, Thomson Learning, Brooks/Cole, 2001
4. Rafael C Gonzalez and Richard E. Woods: Digital Image Processing, Using MATLAB, PHI 2nd Edition 2005.

5. D. A. Forsyth and J. Ponce; Computer Vision: A Modern Approach; Pearson Education; 2003.
6. Richard Szeliski; Computer Vision: Algorithms and Applications, Springer-Verlag London Limited 2011.

