Internship @ RVCE -2021

Industry Certified Internship for Engineering Students (UG/ PG) - 2021

Meaningful internships empower engineering students with up skilling, enrichment of practical knowledge and career building. This is exactly why AICTE has made internships mandatory in engineering curriculum. The unique Industry Certified Internship makes students Ready Engineers; during internship the students work on state-of-the-art multidisciplinary projects, sharpen experimental, analytical and numerical skills, and learn the applicability of technologies in diverse fields. The Internship provides opportunity to associate with state-of-the-art infrastructure of the Centres of Excellence / Competence of RV College of Engineering, Bengaluru and hence to create professional network in their field of interest. The experiential learning during internship through one-to-one interaction with faculty researchers validates the skill-set of the students and hence catalyses the chances of getting placement.

About the Centre for CCTV Research

The Center for CCTV Research, located at Bengaluru's prestigious RV College of Engineering, is India's pioneering research unit in this area, created with the intention of being the catalyst to bridge the wide gap between the industry and creation & execution of humongous CCTV projects in the country. The Center aims to fulfil the Gap of knowledge, Practice, Protocols, Testing, Experiments, Certification, Training, Expertise etc. While being a one stop shop for all CCTV project requirements it would be also the synthesis and the coordination center for all   major CCTV players in the country and beyond. The creation and operations of this Center would be a clear manifestation of this dream. The coming together of different business entities for a project is just crude distribution of work and a confident seamless consortium which is required for this purpose.

Internship Modules for Undergraduate / Postgraduate students

M1. Automatic detection of Traffic Violations
M2. Face Detection in CCTV surveillance camera.
M3. Automatic detection of status of streetlights in surveillance camera
M4. Detection of Animals and reptiles in surveillance videos.
M5. Detection of Sign board reading in high ways.
M6. Human Emotion and Gesture recognition in video sequences.
M7. Automatic detection and tracking of vehicles in video surveillance.
M8. Counting Vehicles in urban traffic
M9. Automatic number plate recognition
M10. Detection of abandoned objects in public places
M11. Video footage auditing
M12. Video compression using selective frame sampling
M13. Automatically color recognition of 4 wheelers vehicles.

<p align="center">**Internship schedule**</p>

<p align="center">**First Week from 01-09-2021 to 08-09-2021 (By Academicians)**</p>

Date and Day	Session 1 (10.00 AM – 11.30 AM)	Session 2 (2.30 PM – 4.00 PM)
Wednesday 01-09-2021	Inaugural address Module 1: Introduction to Internship and topic finalization	Module 2: Introductory Topics in Image Processing & Computer Vision. Resource person: Prof. Hemavathy R,
Thursday 02-09-2021	Module 3: Basics of Python Programming And Machine Learning. (hands-on) Resource person: Prof. Lalitha and Manonmani	Module 4: ML algorithms implementation and Demo Resource person: Prof. Lalitha and Manonmani
Friday 03-09-2021	Module 5: Image processing basics using Python. Resource person: Prof. Hemavathy R	Module 6: CCTV components-generate, transmit, display, and store video data. Resource person: Mr. T Shankar, IISc
Monday 06-09-2021	Module 5:Decision tree and Ensemble Learning, demo Resource person:Prof. Lalitha	Module 6: Segmentation and detection of objects in images Resource person: Dr.Ramakanthkumar P
Tuesday 07-09-2021	Module 7: Video Analytics its applications and demo. Resource person: Dr.Azra Nasreen	Module 8: Basics of ANN and Deep Learning With Demo Resource person: Prof. Hemavathy R
Project Mentoring and Discussion		

<p align="center">**Second Week from 08-09-2021 to 14-09-2021 (By Academicians)**</p>

Week 2: Industry classes and demonstration (9th-14th Sept, 2021)

Date and Day	Session 1 (10.00 AM – 11.30 AM)	Session 2 (2.30 PM – 4.00 PM)
Wednesday 08-09-2021	Module 9: Topic: Video analytics on edge, case study, Resource person: Dr.Azra Nasreen	Module 10: Topic: Video Summarization- case study. Resource person: Prof. Hemavathy R
Thu 09-09-2021	Module 13: Topic: Drone for Video Surveillance, Resource person: Mr. Karan Dhaul, Theta Enerlytics	Module 14: Topic: AI for Video Processing, Resource person: Dr Tinku Acharya, Founder, Videonetics
Fri 10-09-2021	Module 15: Topic: Video analytics overview and demonstration of Briefcam. Resource person: Mr. Amanullah Khan, Mistral Solutions.	
Sat 11-09-2021	Module 16: Topic: Videonetics-iVMS. Resource person:Mr. Sarang	-

	Deshpande, GM - Strategic Alliances and Pre-sales, Videonetics.	
Monday 13-09-2021	Module 17: Topic: Artificial Intelligence & Computer Vision with live demo. Resource person: Mr. Vinod Bhawnani and team, Mialo technologies	
Tuesday 14-09-2021	Module 18: Topic: Importance of Video footage auditing with demo , Resource person: Shri Gautam Goradia, COM-SUR.	Module 19: Topic: Overview and Introduction of Geospatial Technologies, Resource person: Dr Yogita Shukla, Geospatial Technologies,

Week 3 & Week 4: Project mentoring from 15th of September to 1st of October 2021