A Report on Industrial Visit
Sathish Dhawan Space Center (SDSC)SHAR,
Sriharikota, Andhra Pradesh
Organized by Department of Computer Science and Engineering
17 February 2024

Submitted by: Dr. K. Sudhakar, Senior Assistant Professor, Department of Computer Science and Engineering
Report Received on 19.02.2024
Attended Students and Faculty: 49 Students from II CSE and III CSE with 2 Faculties from Department of Computer Science and Engineering.
The Industrial Visit has started from MITS at 9.15 AM

About Sathish Dhawan Space Center (SDSC) SHAR:

SDSC SHAR - An island of technological excellence wherein nature co-exists with the Technocrats

Satish Dhawan Space Centre SHAR (SDSC SHAR), Sriharikota, the Spaceport of India, is one of the lead centres of Indian Space Research Organisation (ISRO), Department of Space (DOS), Government of India. The Centre provides world class launch base infrastructure for national and international customers in accomplishing diverse launch vehicle/satellite missions for remote sensing, communication, navigation & scientific purposes and is one among the best known names of the Spaceports of the world today. The space centre, which was popularly known as SHAR (Sriharikota Range) was renamed as Satish Dhawan Space Centre SHAR on September 5, 2002, in fond memory of Prof. Satish Dhawan, former Chairman of ISRO.

The genesis of SDSC SHAR can be traced back to 1960s when the great visionary Dr. Vikram A Sarabhai embarked upon space research activities in the country and envisioned that "we must be second to none in the application of advanced technologies to the real problems of man and society". To venture on the indigenous development of satellites and their launch vehicles, it was decided to set up a rocket launch station on the East Coast of our country, far from populated areas. Features like a good launch azimuth corridor for various missions, nearness to the equator (benefiting eastward launches) and large uninhabited area for a safety zone have made Sriharikota the ideal location for the spaceport. This spindle shaped island in SPSR Nellore district of Andhra Pradesh, situated in the backwater Pulicat Lake and sandwiched by Buckingham Canal on the West and Bay of Bengal on the East, was chosen in 1969 for setting up the rocket launch station of our country. It became operational on October 9, 1971 with the flight of 'Rohini-125', a small sounding rocket. Since then the facilities here were gradually expanded to meet the growing needs of ISRO. Off Sullurupeta – a small town on the Chennai – Kolkata National highway (NH-5) – a 20 minutes drive towards the East, along the road laid across the Pulicat Lake takes one to Sriharikota.

Sriharikota covers an area of about 43,360 acres (175sq.km) with a coastline of 50km. Eucalyptus, casuarina plantation, scrub jungle vegetation (including a few medicinal herbs), groves of coconut & palm and cane breaks around shallow fresh water ponds dominate the landscape of Sriharikota. To offset the increased usage of land and to balance the nature, simultaneous action of forest regeneration has been contemplated and implemented in right earnest. All these measures have helped in the conservation of flora and fauna of Sriharikota. Both the South-West and the North-East monsoons serve the island. However, the later brings rains during October – December only, thus providing a large number of sunny days suitable for out-door static tests and launch operations. During October – December, thousands of migratory birds visit the Pulicat Lake from faraway places, turning the Sriharikota region into a veritable paradise for ornithologists and nature lovers.

About Industrial Visit:

The total 49 Students from II CSE and III CSE with two faculties (Dr. K.Sudhakar, Senior Assistant Professor and Ms. Arya Surendaran, Assistant Professor) from Computer Science & Engineering Department of MITS College of Engineering, Angallu, visited Sathish Dhawan Space Center (SDSC) SHAR, Sriharikota, AndhraPradesh.

The students visit schedule is as follows.

- 4.30 PM – 5.00 PM : Students are visited the SDSC SHAR exhibition gallery. In that, various satellite models are displayed and their activities are elaborated.

- 5.00 PM to 6.00 PM: Students are assembled in the Satellite launch Gallery, and they have explained about PSLV-F14/INSAT-3DS services and also elaborated about various levels of Rocket separations. At 5.35 PM, PSLV-F14/INSAT-3DS satellite has launched and various satellite separations stages are shown.

- 6.30 PM: Departure.

Also the students met the Scientists working in the institute and shared their experiences. The scientists are explained the working principles of satellite and their features to the students.

This Industrial Visit has published in News Paper

ఇస్రో ప్రయోగించిన ఉపగ్రహాన్ని వీక్షించిన మిట్స్ విద్యార్థులు

మదనపల్లి విజయనేత్ర : మదనపల్లి సమీపంలో గల మదనపల్లి ఇన్స్టిట్యూట్ ఆఫ్ టెక్నాలజీ అండ్ సైన్స్ కళాశాలలోని బి.టెక్ కంప్యూటర్ సైన్స్ అండ్ ఇంజనీరింగ్ మూడవ సంవత్సరము చదువుతున్న విద్యార్థులకు ఇండస్ట్రియల్ విసిట్లో భాగంగా శ్రీ హరికోటలోని షార్ – ఇస్రోను సందర్శించినట్లు కళాశాల ప్రిన్సిపాల్ డాక్టర్ సి. యువరాజ్ తెలిపారు. శనివారం సాయంత్రం ఇస్రో నింగిలోకి ఇన్సాట్ 3డీఎస్ ఉపగ్రహాన్ని విద్యార్థులు శ్రీహరికోట అంతరిక్ష ప్రయోగ కేంద్రం (షార్)లో వీక్షించినట్లు చెప్పారు. సాయంత్రం 5.35 నిమిషాలకు జిఎస్ఎల్వి – ఎఫ్ 14 రాకెట్ నింగిలోకి దూసుకెళ్లిందని, విద్యార్థులు, అధ్యాపకులు,ఎంతో ఆకస్తిగా ఈ కార్యక్రమంలో పాల్గొన్నట్లు ప్రిన్సిపాల్ తెలిపారు.

విగోజాజక నగరంలోని ఆర్ అండ్ బి గహదాగుల

Dr. K. Sudhakar expressed his thanks to SDSC SHAR scientists and their team for providing this wonderful opportunity. Students and faculty coordinators expressed their special thanks and gratitude to HoD Dr S Kalpana and Principal Dr. C. Yuvaraj and Management for the permission and support for this memorable industrial visit.

Outcomes:

At the end of Program, Students can able to,

1. Understand about the various satellites launched by our nation and also understand about their configurations and features.
2. Gained the knowledge about the Satellite launch process with including the various rocket separation stages and working principles.
3. Enrich their skill about the roles of computer science and engineering in Department of space.
4. Understand about the multi-disciplinary research and their important.
5. They can able to work with the collaborative research and their interdisciplinary research skills are improved.