

Industrial Visit

DEPARTMENT OF COMPUTER SCIENCE &ENGINEERING (AI&ML)

S. No.	Industrial visit date(s)	Industries	Year	No. of Students
1	08.11.2024	Sathish Dhawan Space Center (SDSC)SHAR-ISRO	III-CSM	50
2	18.03.2024	Sathish Dhawan Space Center (SDSC)SHAR-ISRO	II-CSM	50
3	17-03-2023	T-Hub	IIICSM	30

SathishDhawan Space Center (SDSC)SHAR-ISRO

Industrial visit/tours for students:

A Report on Industrial VisitSathishDhawan Space Center (SDSC)SHAR,Sriharikota, Andhra PradeshOrganized by Department of Computer Science and Engineering(AI&ML) on 18th March 2024



Submitted by: Mrs.M.Vedavani & Mr.A.Chiranjeevi, Assistant Professor, Department of Computer Science and Engineering (AI&ML)

Report Received on 20.03.2024

Attended Students and Faculty: 30 Students from III CSM with 2 Faculties from Department of Computer Science and Engineering (AI&ML)

The Industrial Visit has started at 9.15 AM

About Industrial Visit:

The total 30 Students from III CSM with two faculties (Mrs.M.Vedavani Assistant Professor and Mr.A.Chiranjeevi Assistant Professor) from CSE (AI&ML) Department of BITS College of Engineering, Narsampet, Warangal, visited SathishDhawan Space Center (SDSC) SHAR, Sriharikota, Andhra Pradesh.

The students visit schedule is as follows.

- 4.00 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/INSAT3DS 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.

Industrial Visit Photos:



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.

Impact analysis of industrial tour**1. Exposure to Real-World Applications of Technology**

- **Learning Experience:** SDSC is a key center for **space research and satellite launches** by the Indian Space Research Organisation (ISRO). For CSE students, the tour can demonstrate the real-world implementation of cutting-edge technology, such as **software systems** for satellite launches, mission control systems, and automation technologies.
- **Understanding Space Systems:** Students can observe the application of **embedded systems, real-time systems, and communication networks** in space missions, which can help them better understand how these concepts are applied in high-stakes environments.

2. Understanding the Role of Computer Science in Space Missions

- **Software Development for Spacecraft:** CSE students can gain insight into how software is developed, tested, and deployed for space exploration, satellite communication, and mission control systems. This can include topics like **simulation software, data analysis, and systems integration**.
- **Data Communication:** The complex communication systems between satellites, space stations, and ground stations depend on strong **network protocols and security measures**, areas where CSE students can develop expertise.
- **Machine Learning and AI in Space:** The growing use of **AI and machine learning** for predictive analytics, autonomous systems, and image processing in satellite data could be of particular interest to CSE students. An industrial tour could expose them to the implementation of these technologies.

3. Encouragement of Innovation and Research

- **Inspiration for Projects and Research:** Exposure to the work done at ISRO can inspire students to consider careers in aerospace technology or related fields. Students might also develop project ideas that involve software or hardware systems used in space research, **satellite communications, or space robotics**.
- **Collaboration Opportunities:** Some students may seek opportunities to collaborate with ISRO on **research or internship programs**. A tour might also spark interest in pursuing **higher studies** in space technology, satellite engineering, or **computer science research** related to space applications.

4. Interdisciplinary Learning

- **Bridging the Gap:** CSE students often work in silos, focusing only on software or algorithms. A visit to an industrial facility like SDSC could expose them to how **interdisciplinary teams** work. They will see how computer scientists, engineers, and researchers work together on systems that rely on software, electronics, mechanics, and physics.
- **Learning Beyond Programming:** Students will gain insights into how computer science integrates with other fields like electrical engineering, mechanical engineering, and aerospace engineering in the space sector.

5. Skill Enhancement

- **Practical Knowledge:** A tour to SDSC helps students understand how the theoretical concepts they study in class are implemented in real-world applications. This could lead to a better grasp of **embedded systems, software engineering, system design, data analysis, and network security**.
- **Problem-Solving and Critical Thinking:** SDSC operations deal with mission-critical systems where failure can have significant consequences. This environment teaches students to develop **resilient systems**, improve **debugging skills**, and work on systems that need high levels of **fault tolerance** and **reliability**.

6. Awareness of Job and Career Opportunities

- **Opportunities at ISRO:** A tour to SDSC will make students aware of potential career opportunities at ISRO and similar space organizations. CSE students could be involved in developing software for satellite systems, mission control software, or AI algorithms used in space exploration.
- **Job Roles for Computer Science Engineers:** Students will gain awareness of various roles such as **software engineers, data scientists, network engineers, and systems engineers** in the space industry. These roles often require a strong foundation in computer science along with knowledge of space systems.

7. Networking with Experts

- **Interaction with Professionals:** The tour will provide opportunities to interact with **industry professionals**, scientists, and engineers who work at ISRO. This can help students establish valuable connections and potentially gain mentorship from industry experts.

8. Understanding Space Mission Lifecycle

- **Software in Space Mission Lifecycle:** Students can observe the full lifecycle of space missions, from initial **design and development** to **launch and monitoring**. The role of computer systems, software integration, and real-time data processing in each phase will be of great learning value.
- **Security Aspects:** Space missions require robust **cybersecurity** measures to protect sensitive data. CSE students can learn about the unique challenges and solutions related to securing communications, data integrity, and mission safety.

Student feedback

Department of Computer Science and Engineering (AI & ML)
PARTICIPANT FEEDBACK FORM

Event: Industrial Visit

Dates: 18-03-2024

Place of Visit: Sathish Dhawan Space Center (SDSC) SHAR-ISRO

Name of the faculty: Mrs. M. Vedavani and Mr. A. Chiranjeevi

Please rate the following parameters as under:

- | | | | | | |
|----|--|--------------|---------|---------|--|
| 1. | Lecture Delivery | | | | |
| | a) Excellent | b) Very Good | c) Good | d) Fair | |
| 2. | Effectiveness of the Visit & training | | | | |
| | a) Excellent | b) Very Good | c) Good | d) Fair | |
| 3. | How useful will be the topic covered | | | | |
| | a) Excellent | b) Very Good | c) Good | d) Fair | |
| 4. | How well did you feel that the visit addressed the main topic? | | | | |
| | a) Excellent | b) Very Good | c) Good | d) Fair | |
| 5. | Time Management | | | | |
| | a) Excellent | b) Very Good | c) Good | d) Fair | |
| 6. | Audio-Visual Facilities | | | | |
| | a) Excellent | b) Very Good | c) Good | d) Fair | |
| 7. | Overall rating of the programme | | | | |
| | a) Excellent | b) Very Good | c) Good | d) Fair | |

8. Any other suggestions which you wish to give.

Internship Students list (A.Y.: 2024-25)

S.No	Name of the student	Roll No.	Organisation/Industry	Dates
1	ArendraDharani	21C31A6606	Mangos Orange Services Pvt.Ltd	6 Months
2	BhukyaThrisha	21C31A6608	Edunet Foundation	6 Weeks
3	AdepuSudheer Kumar	22C31A6601	EduSkills	4 weeks
4	AjmeeraKusuma Sri	22C31A6602	EduSkills	4 weeks
5		22C31A6609	EduSkills	4 weeks
6	KurapatiAshritha	22C31A6628	EduSkills	4 weeks
7	MeruguSai Shiva	22C31A6638	EduSkills	4 weeks
8	MuduthanapellySri SaiMadhurvind	22C31A6645	EduSkills	4 weeks
9	PalleJayaram	22C31A6650	EduSkills	4 weeks
10	PendraAshok	22C31A6652	EduSkills	4 weeks
11	Pitta Vinay	22C31A66555	EduSkills	4 weeks
12	SambarVinay	22C31A66559	EduSkills	4 weeks
13	ThodupunuriSharvani	22C31A6663	EduSkills	4 weeks
14	AkarapuArpan	23C31A6603	EduSkills	4 weeks
15	AruriPavan	23C31A6605	EduSkills	4 weeks
16	BalabakthulaManisha	23C31A6610	EduSkills	4 weeks

17	BatthulaDeepika	23C31A6611	EduSkills	4 weeks
18	BollenaVarsha	23C31A6614	EduSkills	4 weeks
19	ChinnapallyAshwitha	23C31A6618	EduSkills	4 weeks
20	DoliArchana	23C31A6624	EduSkills	4 weeks
21	EgaShivani	23C31A6627	EduSkills	4 weeks
22	GanjiKavyaShri	23C31A6633	EduSkills	4 weeks
23	GoliLaxmiPrasanna	23C31A6634	EduSkills	4 weeks
24	GujjulaRamya	23C31A6635	EduSkills	4 weeks
25	KandukuriJayalaxmi	23C31A6642	EduSkills	4 weeks
26	KarraSahithi Reddy	23C31A6645	EduSkills	4 weeks
27	KothaDivya	23C31A6651	EduSkills	4 weeks
28	KuchanaSravani	23C31A6653	EduSkills	4 weeks
29	MeruguSruthi	23C31A6660	EduSkills	4 weeks
30	Mohammad IliyazShareef	23C31A6662	EduSkills	4 weeks
31	MuduReshma	23C31A6664	EduSkills	4 weeks
32	MunjalaCharanTeja	23C31A6666	EduSkills	4 weeks
33	MutharamHemanth Kumar	23C31A6667	EduSkills	4 weeks
34	NaraganiSathwika	23C31A6669	EduSkills	4 weeks

35	NarishettiVarshini	23C31A6670	EduSkills	4 weeks
36	Odelamanaswitha	23C31A6672	EduSkills	4 weeks
37	OrigantiNavya	23C31A6673	EduSkills	4 weeks
38	PathukalaSai Rahul Kumar	23C31A6675	EduSkills	4 weeks
39	PodishettyRohith	23C31A6677	EduSkills	4 weeks
40	PolepakaJayprakash	23C31A6678	EduSkills	4 weeks
41	PotharajuSandhya	23C31A6681	EduSkills	4 weeks
42	PulluriSathwika	23C31A6682	EduSkills	4 weeks
43	Thakur Neman Singh	23C31A6697	EduSkills	4 weeks
44	VangalaPavithra	23C31A66A3	EduSkills	4 weeks
45	YerramAnirudh Reddy	23C31A66A9	EduSkills	4 weeks
46	BalabakthulaManisha	23C31A6610	MotionCut	4 weeks
47	BollenaVarsha	23C31A6614	MotionCut	4 weeks
48	DoliArchana	23C31A6624	MotionCut	4 weeks
49	ChinnapallyAshwitha	23C31A6618	Devskills hub	4 weeks
50	AkarapuArpan	23C31A6603	Pantech Solutions	4 weeks
51	BairaboinaPreethi	23C31A6608	Pantech Solutions	4 weeks
52	KandukuriJayalaxmi	23C31A6642	Pantech Solutions	4 weeks
53	EgaShivani	23C31A6627	YBI Foundation	4 weeks

54	KothaDivya	23C31A6651	Vodafone Idea Foundation	4 weeks

Internship students list: (A.Y:2023-24)

S.No	Name of the student	Roll No.	Organisation/Industry	Dates
1	Mr.k.koushik	21C31A6602	Edunet Foundation	6 weeks
3	BollojuAnusha	21C31A6611	Edunet Foundation	6 weeks
4	BusireddyMadhuri	21C31A6612	Edunet Foundation	6 weeks
5	B.Rahul	21C31A6632	Edunet Foundation	6 weeks
6	MadipellyMukthaNandhini	21C31A6636	Edunet Foundation	6 weeks
7	NallaLaxmiprasanna	21C31A6644	Edunet Foundation	6 weeks
8	TakkallapallyKanishka	21C31A6658	Edunet Foundation	6 weeks
9	M.sai raj	21C31A6624	Edunet Foundation	6 weeks
10	Mr.M.sandeep	22C35A6606	Edunet Foundation	6 weeks
11	Kuchanarachana	21C31A6631	Edunet Foundation	6 weeks

b. Impact analysis of industrial training (2)

- Industrial training offers students valuable hands-on experience in real-world environments, enabling them to apply theoretical knowledge to practical scenarios. This experience deepens their understanding of the concepts learned in regular courses and provides them with the skills and confidence necessary for successful placement activities.
- These industrial training programs also contribute to achieving course outcomes (CO) and program outcomes (PO). As a result, students are increasingly placed by top companies with better compensation packages. Participating in such programs, which focus on industry-relevant projects, allows students to gain significant experience and expertise.

c. Student feedback on initiative (3)

- Feedback and suggestions from students regarding industry interactions, training programs, and industrial visits are actively gathered.
- By collecting direct feedback, the department can ensure that these initiatives align with student needs and expectations. This feedback also facilitates ongoing enhancement and fine-tuning of these programs to better support students' educational and professional growth.
- Taking these suggestions into account helps improve the overall process, maximizing the benefits for students. Additionally, student input on industrial visits and lecture topics will be carefully evaluated to strengthen their academic and co-curricular skills and knowledge.
- The implementation of these recommendations will be prioritized to ensure continuous progress in students' overall development.