REPORT ON

International Technical Bootcamp

Universiti Sains Islam Malaysia (USIM), Malaysia

September 19 – 25, 2026

1. Introduction

An International Technical Bootcamp was conducted at Universiti Sains Islam Malaysia (USIM), Malaysia, from 19 to 25 September 2026. The programme comprised three technical workshop sessions, three hands-on sessions and one industrial visit, along with cultural visits in Malacca and Kuala Lumpur.

Eighteen students from Rajarajeswari College of Engineering were shortlisted to attend the bootcamp. This report summarises the programme, the sessions conducted and the learning outcomes for the participating students.

2. Programme at a Glance

Particulars	Details
Event	International Technical Bootcamp
Host institution	Universiti Sains Islam Malaysia (USIM), Malaysia
Dates	19 – 25 September 2026
Format	3 technical workshop sessions, 3 hands-on sessions, 1 industrial visit
Industrial visit	Malaysian Research Accelerator for Technology and Innovation (MRANTI)
Participating institution	Rajarajeswari College of Engineering
Students shortlisted	12
Faculty coordinator(s)	Dr.R.Balakrishna

3. Objectives

- To expose students to current developments in IoT, embedded systems, AI and robotics in an international setting.
- To provide hands-on experience through practical sessions that complement classroom learning.
- To give students industry and research exposure through a visit to MRANTI.
- To encourage cross-cultural learning and international academic networking.

4. Schedule of Activities

Date	Activity	Details
Sat, 19 Sep	Travel and arrival in Malaysia	Arrival at Kuala Lumpur International Airport, Accomodation check-in
Sun, 20 Sep	Cultural visit: Malacca	Portuguese town (A Famosa), Stadthuys building, Jonker Walking Street
Mon, 21 Sep	Session 1: IoT and Embedded Systems	Technical workshop, followed by afternoon hands-on session
Tue, 22 Sep	Session 2: AI-Enabled IoT, Data Science and Big Data Analytics	Technical workshop, followed by afternoon hands-on session
Wed, 23 Sep	Session 3: AI Robotics, Artificial Intelligence and Machine Learning	Technical workshop, followed by afternoon industrial visit to MRANTI
Thu, 24 Sep	Cultural visit: Kuala Lumpur	Central Market, Petaling Street, Bukit Bintang, Pavilion Mall, Petronas Twin Towers (KLCC)
Fri, 25 Sep	Cultural visit: Kuala Lumpur	Batu Caves, Thean Hou Temple, Return travel

5. Technical Sessions

5.1 Session 1: IoT and Embedded Systems (Monday)

The first workshop introduced students to the fundamentals of **IoT and Embedded Systems**, covering key concepts, components, applications, and real-world use cases. The session provided students with a clear understanding of how embedded devices and IoT technologies work together to enable smart and connected systems.

The afternoon session focused on **hands-on activities**, where students gained practical exposure to IoT and embedded system components. Through guided demonstrations and

practical exercises, students explored the process of building and working with connected devices, strengthening their understanding through experiential learning.

session.

RAJARAJESWARI
COLLEGE OF ENGINEERING

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5.2 Session 2: AI-Enabled IoT, Data Science and Big Data Analytics (Tuesday)

The second workshop focused on the integration of **Artificial Intelligence (AI) with IoT**, along with the fundamentals of **Data Science and Big Data Analytics**. Students explored how data generated through connected devices can be collected, processed, analyzed, and used to derive meaningful insights and support intelligent decision-making.

The afternoon session provided **hands-on practical exposure**, allowing students to apply the concepts covered during the workshop and gain experience with AI-enabled IoT and data analytics techniques

As part of the programme, students visited the Electrical Laboratory, Greenhouse, Windmill facilities, and Sustainable Energy Laboratories**. The visits provided students with practical exposure to** electrical systems, renewable energy technologies, sustainable practices, and smart agricultural applications**. These interactions helped students connect their classroom learning with real-world applications in** clean energy, sustainability, and emerging technologies**.**

5.3 Session 3: AI Robotics, Artificial Intelligence and Machine Learning (Wednesday)

The third workshop focused on Artificial Intelligence, Machine Learning, and AI-enabled robotics, providing students with insights into intelligent systems and their real-world applications. The afternoon session was dedicated to an industrial visit, offering students an opportunity to observe the practical implementation of these technologies in an industry

environment

6. Industrial Visit: MRANTI

The students visited the Makerspace, Drone and Robotics facilities, and the Thunderbird 5G Network Lab at MRANTI. The visit provided them with valuable exposure to emerging technologies and innovation-driven solutions. They learned about rapid prototyping and hands-on development at the Makerspace, explored the applications of drones and robotics in various sectors, and gained insights into 5G technology and next-generation communication systems at the Thunderbird 5G Network Lab. The experience helped students connect their academic knowledge with real-world technological applications and encouraged them to explore future opportunities in research, innovation, and emerging technologies.

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7. Cultural and Educational Visits

7.1 Malacca (Sunday)

The group visited the historic Portuguese settlement of A Famosa, the iconic Stadthuys building, and the vibrant Jonker Walking Street. The visit provided students with an enriching experience of Malacca's colonial history, cultural diversity, traditional architecture, and local heritage.

7.2 Kuala Lumpur (Thursday)

The group visited Batu Caves, Central Market, Petaling Street, Bukit Bintang, Pavilion Mall, and the iconic Petronas Twin Towers (KLCC), experiencing Kuala Lumpur's cultural heritage, vibrant markets, modern lifestyle, and architectural landmarks.

8. Participating Students

The following 18 students from Dr ACS College of Engineering were shortlisted for the Technical Bootcamp.

S.No	Name	Department

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1	PRITHMA P	ECE
2	PREETHAM H S	ISE
3	SUKHI M BANDI	ISE
4	LEKHANA G	AIML
5	S V VISHAL	AIML
6	JN HARIKA	CSE
7	ABHINANDAN	ECE
8	KEVIN RAJ	CSE
9	THRAA S KUMAR	ISE
10	VIDYASHREE M	CSE
11	HARISH B	EEE
12	NIHAN PASHA	CSE

9. Learning Outcomes

Through the bootcamp, students were expected to:

- Gain a working understanding of IoT and embedded systems.
- Understand how AI, data science and big data analytics are applied to IoT systems.
- Get an introduction to AI robotics and machine learning applications.
- Gain practical, hands-on experience beyond the classroom.
- Experience industry and research practice through the MRANTI visit.
- Develop cross-cultural awareness and confidence in an international environment.

10. Conclusion

The International Technical Bootcamp at USIM, Malaysia, gave the participating students valuable technical, industrial and cultural exposure. The institution is grateful to the host university and all resource persons for their support.