

Technical Report

Robotics Events – Line Follower, Robo Race, Robo War

Technical Activities Committee, CEMK

Subject: This technical report presents a comprehensive overview of the intra-college robotics event, “**ROBOTICS 2K26**,” conducted on **29th and 30th May 2026**. The event comprised three major sub-events — **Robo War, Robo Race, and Line Follower** — and highlights the event structure, rules and judging procedures, evaluation criteria, participant details, and the final results of each competition.

Report Prepared by:

Prof. Soumitra De (Convener, TAC)
Prof. (Dr.) Deb Kumar Adak (Member, TAC)
Prof. Debottam Das (Member, TAC)
Prof. Rinku Khatua (Member, TAC)
Prof. (Dr.) Indrajit Ghosh (Member, TAC)
Mr. Biswajit Majumder (Member, TAC)
Mr. Saradindu Chakraborty (Member, TAC)

Judgement for all the events were done by *Prof. Tanushree Jana* from Dept. of Mechanical Engineering, CEMK

Dated: May 30, 2026

1.0: Executive Summary :

ROBOTICS 2K26 was an intra-college robotics event conducted on 29th and 30th May 2026 to encourage technical innovation, teamwork, and practical engineering skills among students. The event comprised three competitions: **Robo War, Robo Race, and Line Follower**, each designed to test creativity, automation, speed, control, and strategic performance.

Participants from different departments actively competed by presenting self-designed robotic systems. Standardized rules, judging procedures, and evaluation criteria ensured fairness and transparency throughout the competitions. The event successfully promoted hands-on learning, technical collaboration, and student interest in robotics and emerging technologies.

2.0: Event Details:

- **Events:** Line Follower, Robo Race & Robo War
- **Date:** 29th and 30th May 2026
- **Venue:** CEMK Open Air Auditorium
- **Organizing Body:** Technical Activities Committee (TAC)- CEMK
- **Participants:** Students from CEMK

3.0: Events Overview:

- **LINE FOLLOWER:** Line Follower was an autonomous robotics event in which robots were programmed to detect and follow a marked path without manual intervention. The competition focused on sensor integration, programming logic, precision, and response accuracy. Robots were judged based on their ability to complete the track efficiently and with the minimum penalties.

- **ROBO RACE:** Robo Race was a speed and obstacle-based competition where robots were required to complete a predefined track containing various hurdles and challenges in the shortest possible time. The event evaluated the robot's speed, stability, manoeuvrability, and the operator's control efficiency while navigating through the course.
- **ROBO WAR:** Robo War was a combat-based robotics competition in which participants designed and operated manually controlled robots to compete against opponents inside a battle arena. The objective was to disable, push out, or dominate the opponent's robot within the given time limit. The event tested mechanical strength, control systems, durability, and strategic operation skills of the participants.

3.1: Judgement Criteria:

3.1.1 : **LINE FOLLOWER** – Each teams put their bot in the starting square and with the starting of time, they need to turn the switch on and let their bot complete the track and stop at ending square. Points are given on overcoming each hurdles of the lap and penalties are provided on the number of times bot is reset or skipped to its position. Finally, Rate(Points/Second) is calculated to provide fair judgement.

3.1.2: **ROBO RACE** – Each Team autonomously place their bots in the starting arena, and they run through a track filled with obstacles at a distance. For every obstacle they overcome they acquire some points. Penalties are provided while the bot falls off the track or skips and retries an obstacle. Finally, Rate (Points/Second) is calculated to provide fair judgement.

3.1.3: **ROBO WAR** – A match is played between two teams and the team who puts the opponent to the penalty zones gains points as per instructions. It is a time bounded match of 5 minutes where the team gaining max points WINS the Event.

3.2: Volunteers:

The following students served as the student volunteers for the ROBOTICS 2K26 Events and played major role in making the events successful.

Sl. No.:	Name of Student	Roll No.	Roles
1	S. Tejaswar	EE/23/28	Volunteer
2	Amrithesh Das	AIML/23/01	Volunteer
3	Rupankar Manna	EE/23/11	Volunteer
4	Debopriyo Jana	EE/23/23	Volunteer
5	Sreejan Das	ECE/23/16	Volunteer
6	Sohima De	ECE/23/14	Volunteer
7	Subham Das	AIML/23/35	Volunteer
8	Sreejan Das	ECE/23/16	Documentation
9	Amrithesh Das	AIML/23/01	Documentation
10	Sourav Ghosh	ECE/23/17	Anchoring
11	M. Khushi	ECE/23/29	Anchoring
12	Dikpal Mandal	CSE/23/192	Photography
13	Debaprasad Bhowmick	CSE/23/046	Photography
14	Soumyadeep Saha	CSE/23/130	Photography
15	Imroz Ahamed	CSE/23/171	Videography
16	Sindrela Mondal	AIML/23/36	Videography
17	Nayana Manna	CSE/23/145	Volunteer

18	Subhrangsu Das	CSE/23/115	Volunteer
19	Debosmita Samanta	CSE/23/016	Volunteer
20	Dipanjan Manna	AIML/23/35	Volunteer

4.0: LINE FOLLOWER:

The Line Follower event was conducted on 29th May 2026. This event had 8 teams participating whose names are enlisted below. Each team had to prepare a Bot that shall trace a given black line path on a white surface. Student volunteers actively helped the participants to learn how the micro-controllers , sensors and motor driver works and the coding required to move the bot in a manner. Shared below is the participants list and some of the pictures from the event.

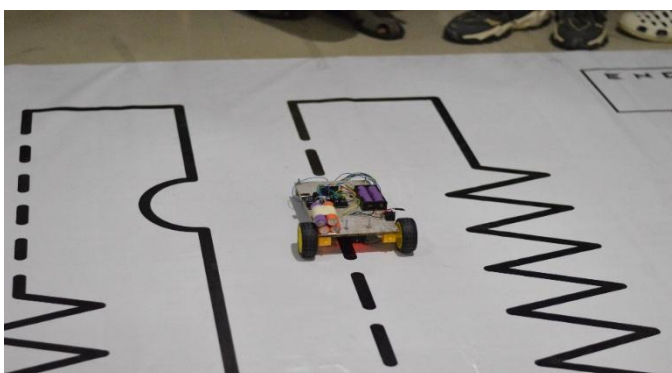
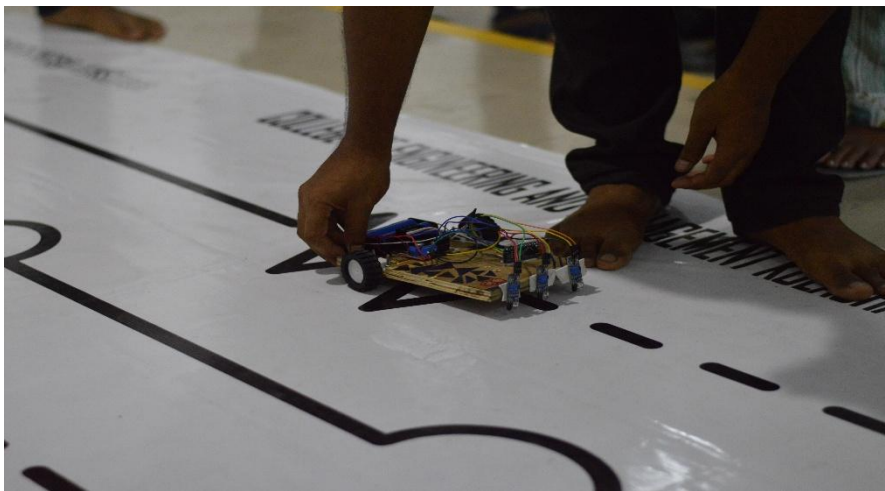
Sl.No:	Team Name	Team Members
1	<i>Robo-Sapiens</i>	Mahavis Alam - CSE/25/048 Nitish Kumar - CSE/25/017 Aviggyan Panda - CSE/25/023 Pratima Pal - CSE/25/045 Subhayan Dasgupta - CSE/25/168
2	<i>Quantum Gear</i>	Ranit Roy - ECE/25/04 Sudipta Maity - EE/25/35 Supravat Giri - ME/25/09 Nilabrata Mondal - ME/25/02 Sujay Barman - EE/25/11
3	<i>ARD INFINITY</i>	Arunava Das - AIML/25/113 Shree Kumar Shaw - AIML/25/095 Srijan Das - AIML/25/116 Anta Samanta - AIML/25/109 Debjit Mondal - AIML/25/100 Pritam Nandi - EE/25/22 Ayush Dutta - CSE/25/290
4	<i>Yukti</i>	Nayan Mondal - ECE/25/06 Dibbyan Ghosh - ECE/25/07 Krishna Prasad Khamrai - CSE/25/104 Debalina Ghosh - CSE/25/131
5	<i>Roboverse</i>	Nibedita Das - ECE/24/015 Subhadip Poria - ECE/25/L16 Sayak Das - ECE/25/001 Riya Hembram - ECE/24/007 Agnibho Ghosh Dastidar - ECE/25/05
6	<i>Trace IQ</i>	Diyasi Nag – ECE/23/04 Ankika Das – ECE/23/05
7	<i>Flashtrack</i>	Sastika Majumdar - AIML/24/014 Ritabrita Maity - AIML/24/010 Palak Singh - AIML/24/030 Anish Senapati - AIML/24/020 Sayantan Jana - AIML/24/016 Susmita Sena - ECE/24/008 Sunita Samui - IT/24/01

8	<i>AutoBots</i>	Soumalya Chatterjee - AIML/25/051 Deeparati Banerjee - AIML/25/038 Puja Jana - AIML/25/037 Malay Jana - AIML/25/041 Raki Chawdhury - AIML/25/021 Himadrita Das - CSE/25/152 Sayan Maiti - AIML/25/055
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Among these 8 Teams, top 3 finalist were :

Position	1 st	2 nd	3 rd
Team Name	ARD INFINITY	AutoBots	Roboverse
Team Leader	Arunava Das	Soumalya Chatterjee	Nibedita Das

Some pictures of the Line Follower Event are listed below and thanks to the Photography Club for their support.



5.0: ROBO RACE:

The Robo Race event was conducted on 30th May 2026. This event had 6 teams participating whose names are enlisted below. Each team had to prepare a Bot that shall have to complete a given track filled with obstacles. Student volunteers actively helped every teams to understand the working of the various appliances like motors, SMPS, DPDT switches etc. and develop their bot properly.

Shared below is the participants list and some of the pictures from the event.

Sl.No:	Team Name	Team Members
1	<i>Robo-Sapiens</i>	Mahavis Alam - CSE/25/048 Nitish Kumar - CSE/25/017 Aviggyan Panda - CSE/25/023 Pratima Pal - CSE/25/045 Subhayan Dasgupta - CSE/25/168
2	<i>ARD INFINITY</i>	Arunava Das - AIML/25/113 Shree Kumar Shaw - AIML/25/095 Srijan Das - AIML/25/116 Anta Samanta - AIML/25/109 Debjit Mondal - AIML/25/100 Pritam Nandi - EE/25/22 Ayush Dutta - CSE/25/290
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4	<i>Robolog</i>	Gourab Biswas - CSE/24/046 Kazi Afreen - CSE/24/054 Tamal Malas - CSE/24/063 Aishik Banerjee - CSE/24/162 Tiyasa Maiti - EE/24/016
5	<i>Phoenix</i>	Sayan Samanta - ECE/24/011 Swarnava Das - ECE/24/010 Soumen Manna - ECE/24/009 Ankan Maiti - ECE/24/012 Susmita Mondal - IT/24/02 Rishita Maity - CSE/24/015
6	<i>Botzilla</i>	Uruj Haider - CSE/25/292 Nikita Sharma - CSE/25/287 Tridib Sahoo - ME/25/03 Triyasha Guchhait - CSE/25/258 Sreyasree Thanda - CSE/25/060

Among these 6 Teams, top 3 finalist were :

Position	1 st	2 nd	3 rd
Team Name	Team Robo-Sapiens	Team Phoenix	Team Roboverse
Team Leader	Mahavis Alam	Sayan Samanta	Nibedita Das

Some pictures of the Robo Race Event are listed below and thanks to the Photography Club for their support.
Some images of the bots prepared by the participants for Robo Race event.



6.0: ROBO WAR:

The Robo War event was conducted on 30th May 2026. This event had 6 teams participating whose names are enlisted below. Each team had to prepare a Bot that shall have to compete against another team's Bot simultaneously as a War for a time limit of 5 minutes. There are areas marked in arena that provided points to the respective team. Student volunteers actively helped every teams to understand the working of the various appliances like motors, SMPS, DPDT switches etc. and develop their bot shield properly for war.

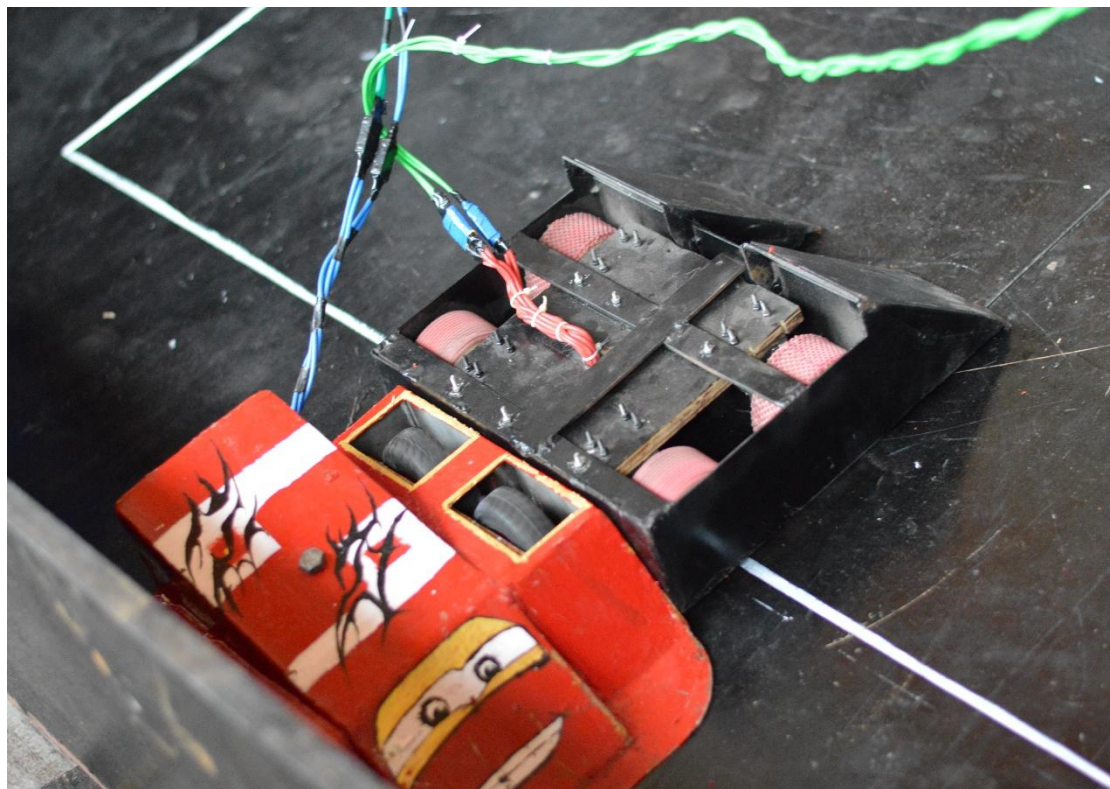
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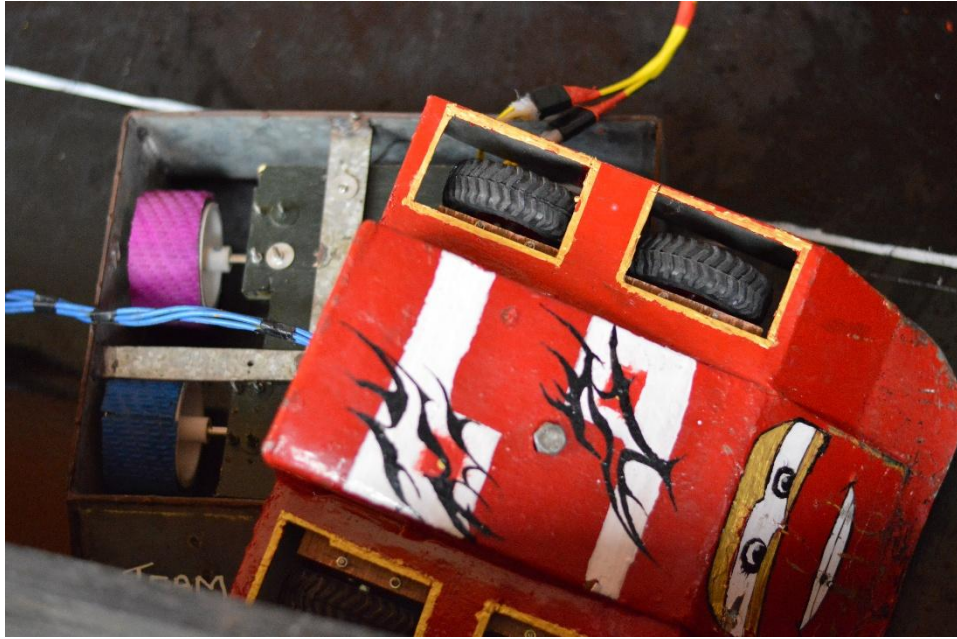
Sl.No:	Team Name	Team Members
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Among these 6 Teams, top 3 finalist were :

Position	1 st	2 nd	3 rd
Team Name	Team Robolog	Team Phoenix	Team Robo-Sapiens
Team Leader	Gourab Biswas	Sayan Samanta	Mahavis Alam

Some pictures of the Robo War Event are listed below and thanks to the Photography Club for their support. Some images of the bots prepared by the participants for Robo War event.





Prof. Soumitra De
Convener, Technical Activities Committee (TAC)
College of Engineering and Management, Kolaghat