# REPORT

## Vigyantram : National Level Championship (zonal level)

**Date: 27th and 28th September, 2019**

**Venue: Delhi Public School, Sector 45, Gurgaon**

Vigyantram, a National Level Championship workshop was a springboard to a deeper understanding of technology, its myriad applications and potential for innovation which prepares the participants for real-world conditions. The workshop was followed by a competition on the second day.

The workshop was conducted on the following topics:

### INTERNET OF THINGS

The aim of the workshop was to give an insight to students into Internet of Things. Students learnt interfacing with sensor, to find the temperature and humidity of a room and also how to interface Google Assistant and Adafruit server to make smart virtual LED System.

### PYTHON

The purpose of the workshop was to explore the fundamentals of Python programming. Students were given insight into python, variables, operators, control structures, files, modules and functions. Students made many programs using these concepts, which helped in a deeper understanding of programming.

### GESTURE CONTROLLED ROBOT

The objective of this program was to focus on coding of Arduino nano and hands-on training to build a gesture controlled robot. Students learnt about embedded coding, Arduino library (open coding), LED blinking coding, LED pattern coding and motor testing coding. As an outcome, students made black line follower robot, object follower robot and keyboard controlled robot.

### HUMANOID ROBOTICS

The purpose of the workshop was to explore the fundamentals of humanoid robotics thoroughly. Students learnt about the various components of the humanoid robot. They were taught in detail about the functioning of various types of motors like AC motor, DC motor, servo motor etc. Students were given an insight into Arduino micro controller, HC-OS Bluetooth module and its programming. As an outcome, students were able to integrate a humanoid robot with mobile.

Overall, the workshop was very informative and interesting. The students enthusiastically participated to learn new concepts which also enhanced team spirit while working in groups. It was an interactive and fruitful workshop.

**Result: A total of the 474 students participated at the zonal level of the workshop. 56 students were selected for the Grand finale at IIT Bombay.**

**TOPIC OF WORKSHOP: INTERNET OF THINGS**

| Rank | S.No. | Name Of Student | Class | Section |
|---|---|---|---|---|
| Rank 1 | 1 | AshmitaHaldar | 8 | B |
| | 2 | ShaashvatPandey | 8 | K |
| | 3 | PrathaAgarwal | 8 | K |
| | 4 | Samyak Jain | 8 | C |
| | 5 | DevashishBisht | 8 | K |

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|---|---|---|---|---|
| Rank 2 | 1 | Khushaali Vijay | 9 | L |
| | 2 | Angad Singh Gill | 9 | G |
| | 3 | RudrakshSehgal | 9 | G |
| | 4 | AdityanSingla | 9 | G |
| | | | | |
| Rank 3 | 1 | NishthaPahuja | 10 | B |
| | 2 | NavyaMathur | 10 | L |
| | 3 | Vidisha | 10 | L |
| | 4 | Sonal Gupta | 10 | L |
| | | | | |
| Rank 4 | 1 | AmanChaturvedi | 10 | E |
| | 2 | VinayakTrivedi | 10 | E |
| | 3 | Alay Singh Negi | 10 | E |

**TOPIC OF WORKSHOP: PYTHON**

| Rank | S.No. | Name Of Student | Class | Section |
|---|---|---|---|---|
| Rank 1 | 1 | Yoshee Jain | 10 | F |
| | 2 | SnehaVivekKondawar | 10 | F |
| | 3 | Sargun Singh Bhatti | 10 | F |
| | | | | |
| Rank 2 | 1 | Akshara Singh | 8 | E |
| | 2 | PradyumnVikram | 8 | C |
| | 3 | Araz Bhatia | 8 | D |
| | | | | |
| Rank 3 | 1 | YashVerma | 11 | J |
| | 2 | Syed Uroaz | 11 | J |
| | 3 | ManavVerma | 11 | J |
| | | | | |
| Rank 4 | 1 | Akashat Mittal | 7 | A |
| | 2 | Aryaman Das | 7 | A |
| | 3 | WritabanSarkar | 7 | A |

**TOPIC OF WORKSHOP: HUMANOID ROBOTICS**

| Rank | S.No. | Name Of Student | Class | Section |
|---|---|---|---|---|
| Rank 1 | 1 | ShreshthaGoel | 10 | D |
| | 2 | Iha Gupta | 10 | D |
| | 3 | IshitaDham | 10 | A |
| | 4 | AarushiGarg | 10 | A |
| | 5 | ManyaArora | 10 | D |

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|---|---|---|---|---|
| Rank 2 | 1 | Pranav Jain | 10 | F |
| | 2 | Tridib Jena | 10 | H |
| | 3 | Siddharth Manish Srivastava | 10 | F |
| | 4 | AmanNagpal | 10 | H |
| | 5 | AayushTripathi | 10 | F |
| | | | | |
| Rank 3 | 1 | TanmaySaluja | 10 | L |
| | 2 | Shikhar Sharma | 10 | E |
| | 3 | KushagraSyal | 10 | L |

**TOPIC OF WORKSHOP: GESTURE CONTROLLED ROBOTICS**

| **Rank** | **S.No.** | **Name Of Student** | **Class** | **Section** |
|---|---|---|---|---|
| Rank 1 | 1 | Aditya Gupta | 9 | B |
| | 2 | Aditya Nair | 9 | B |
| | 3 | K.Aruthea | 9 | G |
| | 4 | Kritika Bhatt | 9 | G |
| | 5 | VidusheeyVarshnay | 9 | G |
| | | | | |
| Rank 2 | 1 | AakashAlloria | 11 | J |
| | 2 | RicheekDutta | 11 | J |
| | 3 | ManavTaluja | 11 | J |
| | 4 | Vaibhav Singh | 11 | J |
| | 5 | IndrajithGopinathan | 11 | J |
| | | | | |
| Rank 3 | 1 | KavinDahiya | 9 | I |
| | 2 | VanshGemlur | 9 | I |
| | 3 | KritiMathur | 9 | I |
| | 4 | Sartaj Singh Gill | 9 | I |
| | 5 | Zorawar Singh Cheema | 9 | A |