

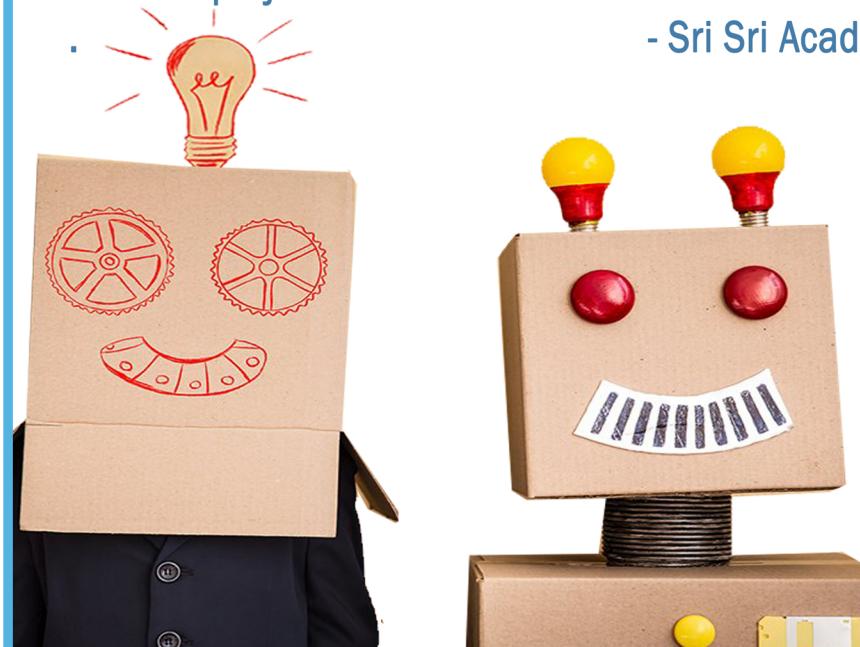
# TINKER TIMES

**MAY, 2021**

Sri Sri Academy, Kolkata on its journey towards Innovations, creativity and tinkering, have collaborated with Rabvik Innovations for years. Sri Sri Academy has secured the second position in the national competition- Shishir Utsav 2020. Recently the school has organized a two-day virtual celebration of the Atal Community Day 2021, where several schools participated. The Atal Tinkering Lab, which was previously operational with class 6,7, and 8th standard, has now expanded to classes 9th and 10th standard as well. This year student of Sri Sri Academy also secured the very prestigious MANAK award, which is one of the flagship programmes of the Department of Science & Technology (DST), Government of India. Students are now being encouraged for publishing their projects so that it eventually helps them for the student-entrepreneurship with their own patents for their projects



- Sri Sri Academy, Kolkata



# HAPPENINGS @SSA:

Sri Sri Academy Kolkata organized a two-day virtual celebration of the Atal Community Day 2021 where several schools participated. The entire program was live telecasted on YouTube.

## DAY 1: 24TH APRIL 2021

The programme began with Sanskrit shlokas chanted by three of our students. This was followed by welcoming and introduction of Ms. Madhuri Pal from Atal Innovation Mission by one of our Emcee Shaivi Kumar. Mr. Abhishek Biswas, our ATL in-charge shared the activities and achievements of the lab in the year 2020. He mentioned how we are trying to encourage girl children to engage in tinkering, breaking the divide between various streams and encouraging teachers to make design and innovation a part of classroom teaching.

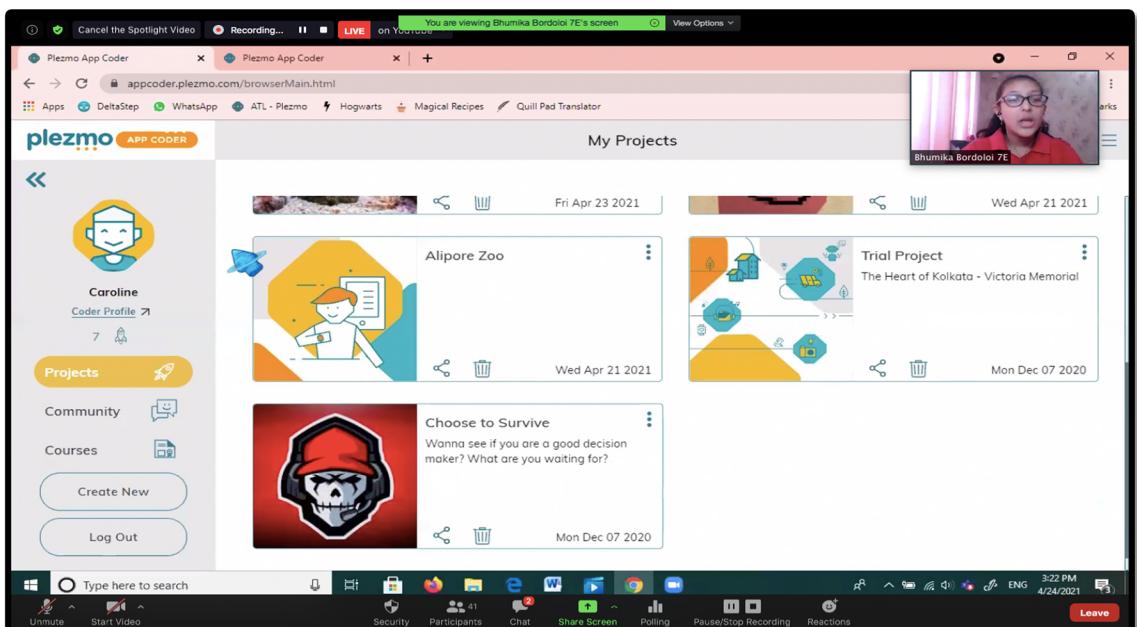
Hansrudh Gupta of class 10 shared his app Child Care for which he had secured the second position in SSRVM Fest in December 2020.

Rishav Mazumdar of class 9 shared his innovative idea, DisRobo, a device to help people maintain social distancing in public places, which had been recognised as one of the 60 best project ideas from West Bengal by Manak Awards 2020.

Bhumika Bordoloi and Korock Hazra conducted a live workshop on app making using the Plezmo app maker. It was an informative and engaging session.

The Guest of Honour, Ms. Madhuri Pal appreciated the endeavour of the school. She appreciated the efforts of the students and encouraged Rishav to create a prototype of his project idea.

The session was attended by many students from Mahadevi Birla World Academy, DPS Howrah and DPS Ruby Park. The ATL in-charge of DAV IIT-KGP, Ms. Lily, teachers from SSRVM Mulund and Mahadevi Birla World Academy were also present.



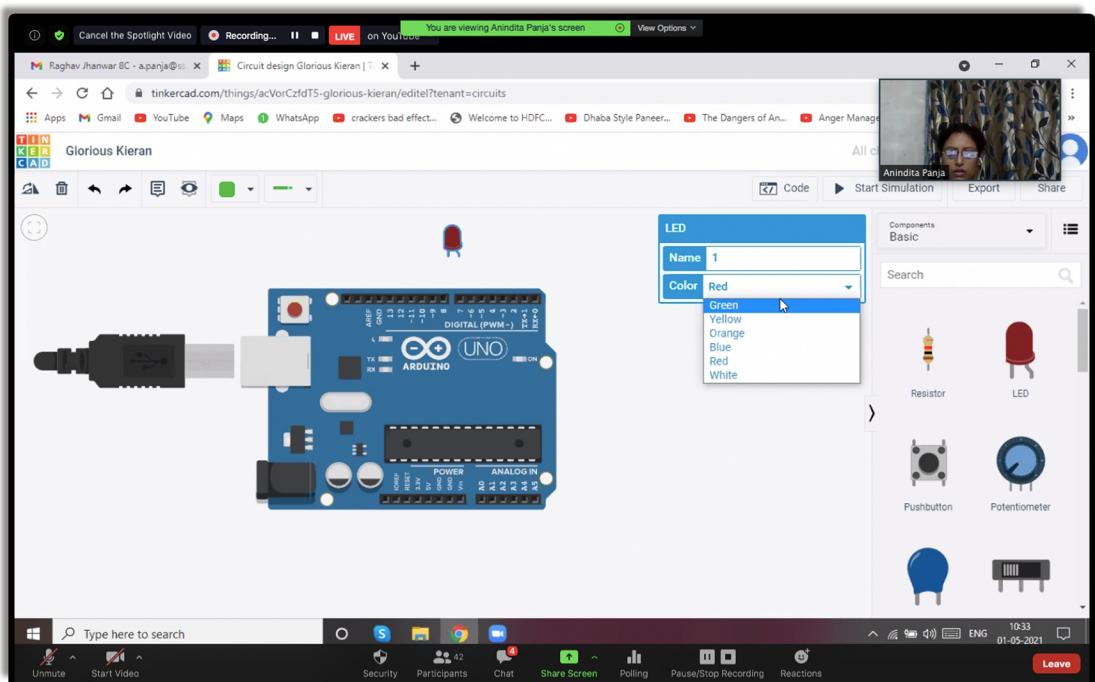
## **DAY 2: MAY 1ST, 2021**

The sequel of the program started with the Om chanting by the Emcee Devanshi Agarwal. It was followed by the introduction of the guest Dr. Farukh Bin Poen, Assistant Professor in Department of Applied Electronics in Instrumentation Engineering, Institute of Technology, Burdwan University.

Thereby, the first workshop of the day- Race the Pace was initiated. The workshop was taken care by Mr. Ahmed Raza (Chemistry Teacher) and Mr. Mushtaque Gani (Physics Teacher). Students of class 6 prepared toy cars using the scrap materials available at home like- plastic bottle, straw and bottle caps. Then they were asked to inflate a balloon and observe as the car moves. The captured videos were displayed and the different scientific phenomenon and concepts associated with it were discussed in an interactive session with the students. Students from Mahadevi Birla World Academy actively participated in this workshop.

The next workshop that followed was- Let's Connect. This workshop was taken care by Mrs. Anindita Panja (Physics teacher) and Mr. Abhishek Biswas (ATL-in-Charge). Here students were shown live as to how to design a circuit in the virtual lab- Tinkercad. Mrs. Panja showed the blinking of LEDs at different intervals of time using Arduino and Mr. Biswas demonstrated the connection of an ultrasonic sensor to Arduino. Students were also shown how to code and simulate their circuit. Students displayed their circuits by screen sharing that they followed during the workshop.

Finally, the two-day program ended with a voted of thanks by Mrs. Sharmistha Baral (Academic Counselor & Mentor).



# TECHNOLOGICAL FACTS:

## CYBER SECURITY – THREATS AND TRENDS



### 1) RISE OF AUTOMOTIVE HACKING

The first cyber security trend in 2021 is going to be the rise of automotive hacking. Modern vehicles nowadays come packed with automated software creating seamless connectivity for drivers in cruise control, engine timing, door lock, airbags, and advanced systems for driver assistance. These vehicles use Bluetooth and WiFi technologies to communicate, which also opens them to several vulnerabilities or threats from hackers. Gaining control of the vehicle or using microphones for eavesdropping is expected to rise in 2021 with more use of automated vehicles. Self-driving or autonomous vehicles use an even further complex mechanism that requires strict cybersecurity measures.

## **2) MOBILE IS THE NEW TARGET**

Cybersecurity trends provide a considerable increase (50 percent) for mobile banking malware or attacks in 2019, making our handheld devices a potential prospect for hackers. All our photos, financial transactions, emails, and messages possess more threats to individuals. Smartphone's virus or malware may capture the attention of cybersecurity trends in 2021.

## **3) INTEGRATING AI WITH CYBER SECURITY**

With AI being introduced in all market segments, this technology with a combination of machine learning has brought tremendous changes in cybersecurity. AI has been paramount in building automated security systems, natural language processing, face detection, and automatic threat detection. Although it is also being used to develop smart malware and attacks to bypass the latest security protocols in controlling data. AI-enabled threat detection systems can predict new attacks and notify admins for any data breach instantly, making it the next cyber security trend in 2021.

## **4) DATA BREACHES: PRIME TARGET**

Data will continue to be a leading concern for organizations around the world. Whether it be for an individual or organization, safeguarding digital data is the primary goal now. Any minor flaw or bug in your system browser or software is a potential vulnerability for hackers to access personal information. New strict measures General Data Protection Regulation (GDPR) was enforced from May 25th, 2018 onwards, offering data protection and privacy for individuals in the European Union(EU).

## KNOWLEDGE BOOSTING TIME!

1. A hacker locks out users and encrypts their personal computer files and data, holding it hostage until they agree to pay to the attacker. What is this practice called?
2. On the evening news you heard the reporter talking about an Internet threat called a 'Botnet'. What exactly is a Botnet?
3. This type of attack is designed to hinder the normal operation of a website, or other network resource.
4. Full form of Malware.
5. Who deploy Malwares to a system or network?
6. \_\_\_\_\_ is a code injecting method used for attacking the database of a system / website.
7. An attempt to harm, damage or cause threat to a system or network is broadly termed as \_\_\_\_\_.
8. \_\_\_\_\_ are the special type of programs used for recording and tracking user's keystroke.
9. An example of wireless attack.
10. Which method of hacking will record all your keystrokes?

### Answer Box.

- 1) Ransomware
- 2) A group of computers running malicious programs that are remotely controlled by cybercriminals
- 3) DoS attack
- 4) Malicious Software
- 5) Criminal organizations, Black hat hackers, malware developers, cyber-terrorists
- 6) SQL Injection
- 7) Cyber Attack
- 8) Keylogger
- 9) Wireless Hijacking/ Eavesdropping
- 10) Keylogging



## **ABOUT US**

Rabvik Innovations aims to train and prepare the next generation of robotics, scientists, and engineers innovative enough to push the envelope and be creative enough to achieve the impossible. Rabvik Labs prepare the students for a toe-dip in the pool which will become an ocean in a few years and will also allow them to get real-life experience in the world of robotics, automation, AI and IoT.

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