VIT®

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

Report on Extra-Curricular activities done as a part of

EXC1070 Working to engineer a better world

Submitted by

Rishabh Agrawal
20BIT0047

To
Dr. Neelu Khare

Fall Semester, 2021-2022

Table of Activities

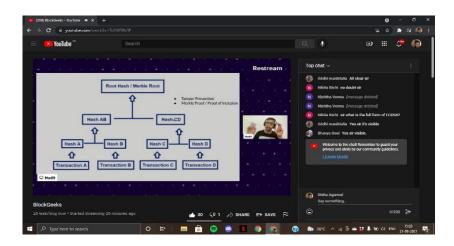| S. No	TOPICS	Date	Hours Spent	Page No.
1	BlockGeeks	21/08/2021	5	2
	BlockGeeks Implementation	21/08/2021	3	2
2	IOT Leveraging 5G	28/08/2021	5	3
3	Inspecting the Web World	04/09/2021	5	4
	Inspecting the Web World Implementation	04/09/2021	4	4
4	App Dev Simplified	05/09/2021	5	5
	App Dev Simplified Implementation	05/09/2021	3	5
5	Getting started with ML	08/01/2022	5	6
6	Intro to Blockchain	09/01/2022	5	7
7	Pathway to Hardware	29/01/2022	5	8
	Pathway to Hardware Implementation	29/01/2022	3	8
8	WebDev 101	05/02/2022	5	9
	WebDev 101 Implementation	05/02/2022	3	9
9	AndroidVerse	06/02/2022	5	10
	AndroidVerse Implementation	06/02/2022	4	10
10	Neuronectics	16/04/2022	5	11
11	CyberRely	17/04/2022	5	12
12	Report preparation		15	
		Total Hours	**90**	

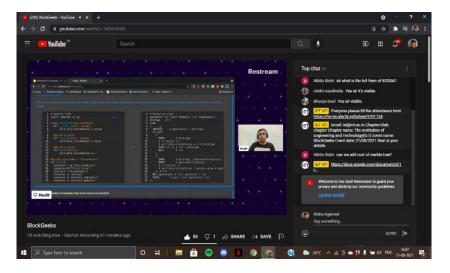## Description of Events/ Activities

- **Event Name:** BlockGeeks + BlockGeeks Implementation

- **About the Event:**

  IET-VIT hosted the event, and Mr. Mudit Mudra was invited as a guest speaker. The major goal of the workshop was to educate viewers on the fundamentals of blockchain technology. The presentation covered the fundamentals of blockchain and cryptocurrencies, as well as a brief overview. Hash functions, Merkle root as a data structure, smart contracts, and other topics were discussed by the speaker. SmartPy and Better Call Dev were also demonstrated during the session. The speaker answered questions, and it was a really engaging session in which a lot of fundamental knowledge was gained.

- **No. of hours spent:** 5+3

- **Photos / Screenshots:**

- **Event Name:** IOT Leveraging 5G

- **About the Event:**

    The session was organized by IET-VIT with the goal of introducing IoT to students and clarifying commonly used phrases and concepts linked to it. The attendees were given an overview of the foundations of IoT and how it is being used in various industries. The speaker then discussed 5G connections and their usefulness in IoT, as well as some of the differences between 4G and 5G networks.

    Topics such as the utilization of 5G in a range of fields, IoT and ICT Interventions, and so on were also discussed. Finally, the speaker answered all of the guests' questions from the chat, bringing the session to a close. Overall, it was an engaging workshop with a lot to take away.

- **No. of hours spent:** 5
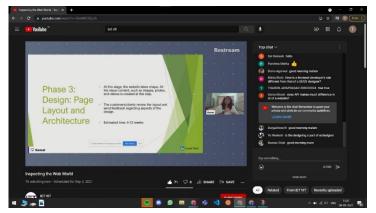
- **Photos / Screenshots:**

- **Event Name:** Inspecting the Web World + Inspecting the Web World Implementation

- **About the Event:**

  The goal was to begin the Web development journey and see how it went. The lesson began with the fundamentals of Web development and the stages involved, from HTML to testing. She used VScode in between to explain all the important languages and how they are written. After then, the fundamentals of Azure's cloud services and ASP were covered. Finally, the lecturer encouraged and thoroughly explained all the participants' queues.

- **No. of hours spent:** 5+4

- **Photos / Screenshots:**

- **Event Name:** App Dev Simplified + App Dev Simplified Implementation

- **About the Event:**

  The workshop's main goal is to help viewers understand app development in a more straightforward manner. The event began with an introduction to app development, during which the speaker offered some of his personal experiences that the audience may benefit from. He demonstrated how to use the Ionic Framework to create a sample application. Then there are hackathon tips and tricks for constructing an application. He also talked about his experiences participating in hackathons and the apps he released on the Google Play Store. Finally, he answered all the attendees' questions, making it an engaging session with a lot of information to take away.

- **No. of hours spent:** 5+3
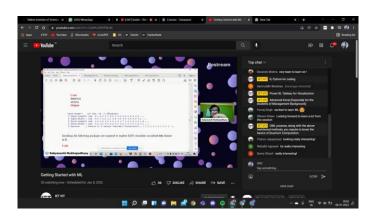
- **Photos / Screenshots:**

- **Event Name:** Getting started with ML

- **About the Event:**

    The event was hosted by IET-VIT and began with a host's introduction of the speaker and the event. The goal of the session was to prepare freshmen for their journey into machine learning. The Speaker began by outlining the fundamentals of machine learning as well as all of the future vocations that could benefit from it. He also explained the code behind algorithms like Naive Bayes, KNN, and others to give an overview. Throughout the session, there was interactivity. They answered adequately at the end of the meeting, and participants filled out a questionnaire in which they asked all of their questions.
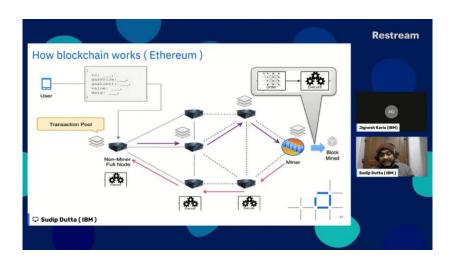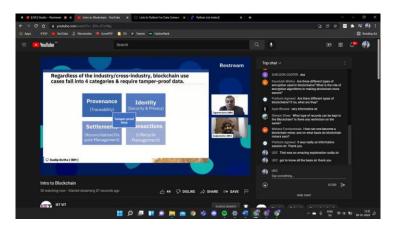
- **No. of hours spent:** 5

- **Photos / Screenshots:**

- **Event Name:** Intro to Blockchain

- **About the Event:**

    The event was hosted by IET-VIT and began with the host introducing the speakers and the event. The goal of the session was to prepare freshmen for their journey into Blockchain. The Speaker began by outlining the fundamentals of Blockchain as well as all of the potential future professions where blockchain might be used. They explained why blockchain should be studied and showed the freshmen many varieties of blockchain, which helped them understand the subject better. They answered adequately at the end of the meeting, and participants filled out a questionnaire in which they asked all of their questions.

- **No. of hours spent:** 5
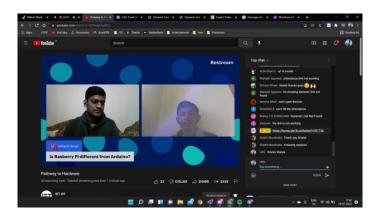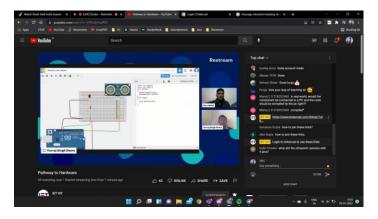
- **Photos / Screenshots:**

- **Event Name:** Pathway to Hardware + Pathway to Hardware Implementation

- **About the Event:**
The event was hosted by TFD students and hosted by IET-VIT. The goal of the programme was to prepare freshmen for their voyage to Hardware. The speaker started by going through the fundamentals of hardware components, microcontrollers, and processors. The workings of IOT were thoroughly explained. The use of Tinkercad was demonstrated, and a tiny project was created at the same time. They answered adequately at the end of the meeting, and participants filled out a questionnaire in which they asked all their questions.

- **No. of hours spent:** 5+3
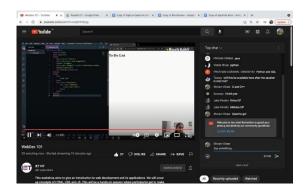
- **Photos / Screenshots:**

- **Event Name:** WebDev 101 + WebDev 101 Implementation

- **About the Event:**

    The event was hosted by IET-VIT and kicked off with a bang by the presenters. The workshop's major goal was to provide attendees an overview of web development and its applications, as well as to educate them on how websites are built. The session covers the fundamentals of HTML, CSS, and JavaScript. It began with a description of 'What is WebDev' and how one should get started in this industry. A live demonstration of VS Code was also included, in which attendees were given the opportunity to create a project employing front-end technology. Everything was taught in detail, and viewers learned how to present the Web Page using WebDev applications. A quick review of back-end technologies and their applications was also provided. The audience were also given an overview of Git and GitHub, as well as instructions on how to utilize them. During the workshop, the YouTube Chat Section was very busy.

- **No. of hours spent:** 5+3
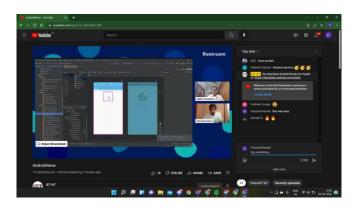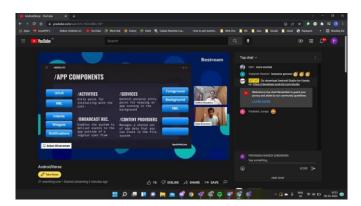
- **Photos / Screenshots:**

- **Event Name:** AndroidVerse + AndroidVerse Implementation
- **About the Event:**

    The event was hosted by IET-VIT and kicked off with a bang by the presenters. The workshop's major goal was to provide attendees an overview of Android development and applications, as well as to show them how an app is made. The course covers the fundamentals of Android, OS, and apps. It began with an overview of 'What is Android Development' and how one should get started in this profession. It also included a live presentation of Android Studio, in which attendees were given the opportunity to create a project using several technologies. Everything was described in great detail. They assisted in the development of a tiny calculator game with juniors in order to have a better understanding of how it works. The Chat Section on YouTube was quite active during the workshop. From time to time, all doubts were cleared

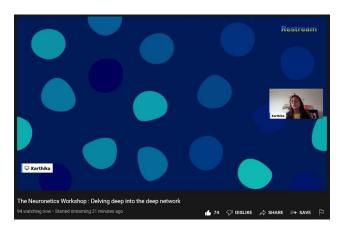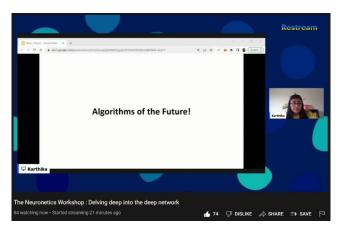- **No. of hours spent:** 5+4
- **Photos / Screenshots:**

- **Event Name:** Neuronetics

- **About the Event:**

    The IET-VIT Neuronetics Workshop began with an overview of neuroscience and its contemporary components. The short Neurobiology segment helped the participants understand the principles that followed. The presenter then described her experience in the area and the project she established. The speaker then went over the impact of machine learning on neuroscience. Pavlov's experiment was used to show the notion of Reinforcement Learning. Following that, we gave attendees a quick review of the various core computational neuroscience models. The presenter then provided attendees with resources to help them get started in this sector. Finally, the program came to a close with a thorough Q&A session.

- **No. of hours spent:** 5

- **Photos / Screenshots:**

- **Event Name:** CyberRely

- **About the Event:**

  The IET-VIT CyberRely Workshop began with knowing increased use of digital platform in pandemic accompanied with surge internet attacks which further connected with increased data breaches. The main focus of the event was on prevention of web vulnerabilities. Starting with a brief explanation on OWSAP Top 10-2021 to make it easy for attendees to understand, they were given an overview about web application with the help of a flowchart diagram where he also motivated attendees to be passionate enough to work in this field. Further he explained with examples the different vulnerabilities starting from Broken Access Control followed by Cryptography failures, Injection attack,, Security Logging and Monitoring failures, SSFR and their preventions and many more. The presenter concluded the workshop by whole overview of session in a flowchart.

- **No. of hours spent:** 5

- **Photos / Screenshots:**