

CENTRE FOR CLOUD COMPUTING AND CYBER SECURITY (C3)

About the Centre

The Cyber Security and Cloud Computing Centre (C3 Centre) at the Rajalakshmi Institute of Technology has been established to provide a center of expertise in the technology and management of cyber security, cybercrime and how to secure data in Cloud. C3 Centre provides training, teaching and research in the fast-paced topics of cyber security and Cloud Computing.

Objectives of the Centre

- To investigate the nature of modern threats posed to information infrastructures.
- To investigate and develop tools and techniques that will allow the identification and assessment of vulnerabilities of information systems.
- To suggest some countermeasures for the future challenges to be faced in cloud computing.

Facilities Available

1. 25 Desktops with i7 processor **(image for systems - SJ)**
2. Intel Xeon server **(change photo)**



Configurations

RAX is our most flexible line of rackmount servers, ranging in size from 1U to 4U and featuring a proven, high level of reliability and performance. Our next generation line of RAX Servers provide support for the latest technologies in CPU, GPU, Storage, Networking and Memory, while leveraging industry-leading performance-per-watt savings.

Faculty Members

Name of the Faculty	Specialization
Dr. V. Anjana Devi – Centre Incharge	Network Security
Mr. R. Arunkumar – Centre Incharge	Wireless Networks, LiFi and WiFi
Dr. D. C. Joy Winnie Wise	Wireless Networks and Security
Dr. T. Rajendran	Cloud and Network Security
Mr. B. Sriman	Security and Blockchain
Ms. E. Venitha	Cloud and Cyber Security
Ms. S. H. Annie Silviya	Security and Blockchain

Enrolled Students list

S. No.	Roll no.	Name of the student
1	202001051	P. S. GAYATHRIPRIYA
2	202001030	G BHARATH KALYAN
3	202001007	AHAMED AKSHAN S
4	202001044	DHINAKARAN D G S
5	202001051	P. S. GAYATHRIPRIYA
6	202001048	DORON.N.C.DANIEL
7	202001052	S R GOKKUL HAREN
8	202001047	DIVYA VARSHA J
9	202001009	AISHWARYA S
10	202001041	DHANUSH
11	202001024	BALAVIGNESH R

S. No.	Roll no.	Name of the student
12	202001021	ASWATH G
13	202001043	DHEERAJ K
14	202001003	ABIRAMI S
15	202001055	HARIHARAN K
16	202001010	AKSHAYA. A
17	202001001	AARTHI G
18	202001054	HANISH. E
19	202001013	ANITHRA PRABHA P
20	202001025	B.BALAMURUGAN
21	202001015	ARAVIND S
22	202001017	ARJUNSIVA S
23	202001049	GANESH .M
24	202001056	HARIHARAN M
25	202001057	HARI PRASHATH V
26	202001036	CHITHRA.B
27	202001038	DEEPAK RAJ S
28	202001005	ADELIN GRACE TANYA. S
29	202001046	DIVITHA P M
30	202001031	BHUVANESWARI. P
31	202001034	A.CHARULATHA
32	202001087	S MANIKANDAN
33	202001065	JEEVASAKTHI S
34	202001063	JAI DEEPAK S H
35	202001095	NISHAA S
36	202001104	PRASANNAKUMAR V
37	202001100	PRADEEP.T
38	202001082	LOKESHWER .S
39	202001059	HARISH S K
40	202001097	NITHYASHREE. M
41	202001104	PRASANNAKUMAR V
42	202001060	HARRISHWAR M

S. No.	Roll no.	Name of the student
43	202001104	PRASANNAKUMAR V
44	202001102	PRANAV R P
45	202001132	K SATYA SAMRAT ASHOK CHAKR
46	202001154	THIRULOK R
47	202001134	SENTHIL KUMAR .B
48	202001137	SHYAM SUNDAR B
49	202001147	M.K.SUNDARA DAMODHARAN
50	202001125	SANTHOSH R
51	202001129	SARAVAANAA KUMAR D
52	202001120	G.SAIPRASAAD
53	202001121	R.SAILENDIRAN
54	202001124	SANTHOSH GURU R
55	202001127	SARANYA. R
56	202001106	PRAVEEN R
57	202001166	VISWESH S
58	202001160	VENKATA SAI DEEPA A
59	202001140	SIVARANJITH V
60	202001117	ROHEETH DT
61	202001164	VINITH GOPAL R
62	202001149	SURYA K
63	202001148	SURESH KISHNA A
64	202001152	TARUN KUMAR S
65	202001146	SUJATHA K
66	202001145	PL.SRINITHI
67	202001161	VIDHYAA SHREE.C.S
68	202001139	SINDHU.V
69	202001153	THARUN M
70	202001125	SANTHOSH R
71	202001119	RUMA PRASAD H
72	202001150	SURYA LAKSHMANAN

S. No.	Roll no.	Name of the student
73	201901156	VENKATASRIRAM S
74	201901127	SHRIRAM C S
75	201901007	S.ADITI
76	201901068	LOGEETH KUMAR M
77	201901151	THARANI K
78	201901126	SHIFI S J
79	201901111	SAI PRIYA S
80	201901118	SARRAN KUMAR N K
81	201901131	SIVAKUMAR. M
82	202001122	SAKTHIPRABHAKAR B
83	201901046	HUMAID AHMED H
84	201901045	HRUDHAI NARAYAN S
85	201902018	GOWSIKA G
86	201902083	SOWMYA. S
87	201902001	ADHILAKSHMI R
88	201902043	LOKESH N
89	201902063	B.RAJARITHAN
90	201902078	SHYLENDRAN R
91	201902040	LATHA D
92	201902074	SANTOSH V
93	202002014	DHANUSHPRAKASH V C
94	202002028	KRITHIKA K
95	201902024	HARISH R
96	201902012	DHANUSH G
97	201902062	RAGHAVAN V
98	201902002	ADITHYAN P
99	201902087	SWETHA G
100	202006042	THILAK KUMAR NM
101	202006029	RAVIKUMAR.K
102	202006021	A.R.MOHITH RAHUL
103	202006009	GOKUL P

S. No.	Roll no.	Name of the student
104	202006013	KARTHIKA R
105	202006007	DEEPAK M
106	200207005	ANANDARAJA P
107	202007043	RAIDEN LUKE

Patents Details

S.No.	Title	Application Number	Status
1.	Method and System for Providing Security in Financial Transactions	202041048682	Filed

Details of Industry/Academic Mentors

S.No.	Industry/Academic Mentors	Name of the Industry/Institution	Expertise	Logo
1.	Mr. Ravishankar Associate Director	L&T Edu Tech, Chennai.	Cloud and Cyber Security	
2.	Mr. Kaushik Dhanendran Expert Engineer	SIEM, India	Cloud and Cyber Security	
3	Dr. G. Vithya Professor	KL University , AP	Wireless Networks and Security	

Details of MoUs

S.No.	Name of the Industry	Date of MoU	Intend
1.	Microsoft Azure. 	13/07/22	Training in MS Azure
2.	Virtusa google Cloud	24/06/22	Training in Google Cloud

		virtusa			
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Academic Partnership

S.No.	Name of the Industry	Date of Partnership
1.	EC Council Academia 	28-12-2020 – 28-12-2023

Details of Completed/Ongoing Projects

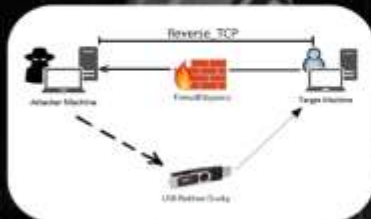
1. Car Key Fob Reply Attack

KEY STROKE ATTACK

Penetrate the End User System using an USB Rubber Ducky via Metasploit

OBJECTIVE

- > To beget the Payload
- > To Seize the Remote access of the Victim Devices



MODEL

- > Injecting the USB Rubber Ducky into the Victim System.
- > After Injecting, Initially turning off the Window Defender.
- > Subsequently Downloading the Payload via Hosted Webserver
- > Victim Payload is accessed using Metasploit Framework

PREVENTION

- > Lock all the Ongoing Connectivity except Required Service (System Network Services).
- > Use Strong Firewall and Anti-virus Software

- > The Payload runs in the Victim's Powershell.
- > Reverse TCP is used to establish Contact with the Victim Device.

CONCLUSION

By using this Attack, Intruder can View or Hack Sensitive Information from the User's Network or User's System



Presented by Kaulthuban R.S, Hari Pradheeth V, Shri Varshini

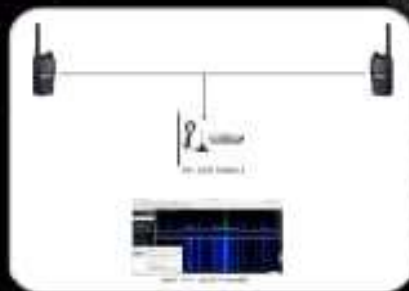
2. DMR Voice Tracking using SDR

DMR VOICE TRACKING

Tracking DMR frequency within in a specified range using RTL-SDR Dongle

OBJECTIVE

- >> To capture the open radio frequencies from our surroundings using Realtek Software Defined radio(RTL-SDR).
- >> To Tune a particular frequency such that a clear audio can be heard without any disruption.
- >> To record and analyze all the captured frequencies using AIRSPY software.



DESCRIPTION

- >> The sdr will detect the nearby frequencies using antennas
- >> Then the sdr will convert the received analog frequencies into digital signals
- >> The sdr dongle will be connected to the airspy software through which the digital signals can be viewed.
- >> A particular frequency can be tuned to hear the live audio being transmitted
- >> The transmitted audio can be recorded for further interpretation

Conclusion

- >> By doing this we can conclude that open DMR frequencies can be tapped easily
- >> Using SDR and recorded using various softwares like AIRSPY , or using devices that transmits encrypted frequencies we can prevent these types of cyber attacks

3. Keystroke Attack

CAR KEY FOB REPLY ATTACK

Capturing frequency from car key fob and replying the same frequency with RASPBERRY PI and RPITX tool

OBJECTIVE

- ≡ To acquire key fob frequency using the RTL-SDR (RealTek Software Defined Radio) Toolkit On a Raspberry Pi.
- ≡ The frequency data will be saved as an .iq file.
- ≡ The Raspberry Pi will then transmit the acquired frequency.



DESCRIPTION



- ≡ The Central Processing Unit (CPU) is notified when the button on your key fob is pressed.
- ≡ The CPU sends a data stream to the radio frequency (RF) transmitter.
- ≡ The Key fob acts as a radio.
- ≡ For security, this data stream contains command and rolling codes.
- ≡ The remote keyless system receiver in the automobile takes the RF signal, extracts it, and feeds the data stream to the CPU.
- ≡ We can unlock the automobile rather than using a key fob by passing the desired frequency.

PREVENTION

Concerns about reply attacks have prompted automakers to introduce new features. Some fobs for example, feature motion sensors that automatically put the communication antenna in 'sleep mode' if the fob isn't handled (or moved) for more than a few moments. The motion sensor turns the antenna back on when the fob is picked up.

CONCLUSION

By this method, we can be able to unlock a car without using the key fob and this attack is now being prevented by using rolling keys. (changes frequencies each time)

OUTPUT

```
#: Realtek, RTL2838UHIDIR, SN: 80808081
!
Detached kernel driver
Using device 0: Generic RTL2832U OEM exact sample
rate is: 250000.868014 Hz
Found Rafael Micro R820T tuner
[ERROR] PLL not locked!
Sampling at 250000 S/s, Tuned to 314658000 Hz.
Tuner gain set to -42.18 dB. (ORreading samples in
async mode...
```

Events conducted

- Technical Seminar was conducted on “Recent Cyber Security Threats”
- Hands on session in ethical hacking.

1. Event - Technical Seminar on “Recent Cyber Security Threats”

Date of Event: 24th April 2022, @1.30PM

Event Venue: Green Block - Auditorium

Number of Participates: 100

Resource Person: Mr. Varun Chandrasekhar, Founder-Axiom Consulting, Chennai.

The Center for Cyber Security and Cloud Computing (C3 - Centre) conducted a technical seminar on "Recent Cyber Security Threats" on April 24, 2022. The session was open to all students at the centre, and Dr. P. K. Nagarajan, the RIT Principal, inaugurated the session and welcomed the speaker, Mr. Varun Chandrasekhar. The Speaker Mr. Varun Chandrasekhar, Founder of Axiom Consulting in Chennai, addressed gathering on a real-time application exclusively designed for public internet users, a range of security challenges and risks. Participants got the opportunity to discuss various cyber security issues and related strategies throughout the session.

The following topics were covered: a brief history of cyber security and its current state, Types of cyber-attacks, supply chain assaults, poor cyber hygiene, ransomware, a few examples of cyber-attacks, and ultimately, how can we protect ourselves.

Participants' feedback was collected at the end of the session, and an assessment quiz exam was conducted to ensure seminar understanding. Statistics on feedback and assessments are included.



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Affiliated to Anna University)

Department of Computer Science and Engineering
&
CYBER SECURITY AND CLOUD COMPUTING CENTRE (C3)

cordially invite you to the
Technical Seminar
on
Recent Cyber Security Threats







Resource Person
Mr. Varun Chandrasekhar
Founder-Axiom Consulting, Stranger Arts,
Tech Entrepreneur, Chennai

Date: 23rd April 2022
Time: 1:30 PM

Dr. D. C. Joy Winnie Wise
HoD-CSE

Dr. P. K. Nagarajan
Principal

Dr. Haree Shankar Meganathan
Vice Chairman

Zoom Meeting Link:
<https://us04web.zoom.us/j/72667273409?pwd=1W9ga-tlnZoshQgaXMkCTukgZLWKEA.1>

Brochure – Technical Seminar

Event Photographs



Snapshot -Technical Seminar on “Recent Cyber Security Threats”

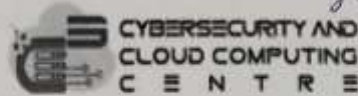
Date: 23-04-2022

Attendance Sheet

Event Name: Tech- Seminar on "Recent Cyber Security Threats"

S.No	Student Name	Register Number	Signature
1.	R. S. Kausthuban	211721243085	Kausthuban
2.	S. Kaviarasan	211720104075	Kavi
3.	G. Karthikeyan	211720104072	Karthikeyan
4.	R. Edwin Raj	211720104041	R. Edwin
5.	M. Bhuvanesh	21172104034	M. B.
6.	ARVIND. L	201721104019	Arvind
7.	ASHWATH. M	211721104022	Aswath
8.	ANJANASH S	211721104022	Anjanash
9.	MARJINARANS	211721104022	Marjinarans
10.	Ashok Kumar S	211721104021	Ashok
11.	Lokesh R	211720243030	Lokesh
12.	BALAJI. V	211721104029	B. V.
13.	Abisheek. J	211721104003	Abisheek
14.	ANTONY ANWIN RAJ P	211721104014	Antony
15.	M. Kalyan Kumar	211721104063	M. Kalyan
16.	Abhishek	211721104036	Abhishek
17.	S. S. Adhithyan	211721104006	S. S. Adhithyan
18.	Abhithya	211721104026	Abhithya
19.	S. BALAJI SUNDAR	211721104030	S. Balaji
20.	M. Anbuchelvan	211721104011	M. Anbuchelvan
21.	Hari H. Krishnan	211721104051	Hari H. Krishnan
22.	A. Andrew Jothi	202101022	A. Andrew
23.	M. Ashwin	202101023	M. Ashwin
24.	Ethias Dhevan	202101044	Ethias
25.	Eric Ghalwin	202101043	Eric
26.	Jayarama	202101057	Jayarama

Snapshot - Event Attendance



202101031
Bala Hiranjan

Guest Speaker Evaluation Form

Speaker: Mr. Varun Chandrasekhar,
Founder-Axiom Consulting

Date: 23-04-2022

1. This speaker was interesting.
☒ Strongly agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree
2. This speaker talked about something I didn't know already.
☒ Strongly agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree
3. This speaker helped me learn about how marketing works in the real world.
☐ Strongly agree ☒ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree
4. This speaker provided information I can use to be successful in this class.
☒ Strongly agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree
5. This speaker provided information I can use to be successful in my career.
☒ Strongly agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree
6. This speaker helped me understand a little bit more about myself and what I want to do in the future.
☐ Strongly agree ☒ Agree ☐ Neutral ☒ Disagree ☐ Strongly Disagree
7. This speaker should be invited back to speak to one of Dr. Baker's classes again.
☒ Strongly agree ☐ Agree ☐ Neutral ☐ Disagree ☐ Strongly Disagree
8. What kind of questions do you have now that you wish had been answered by this speaker?

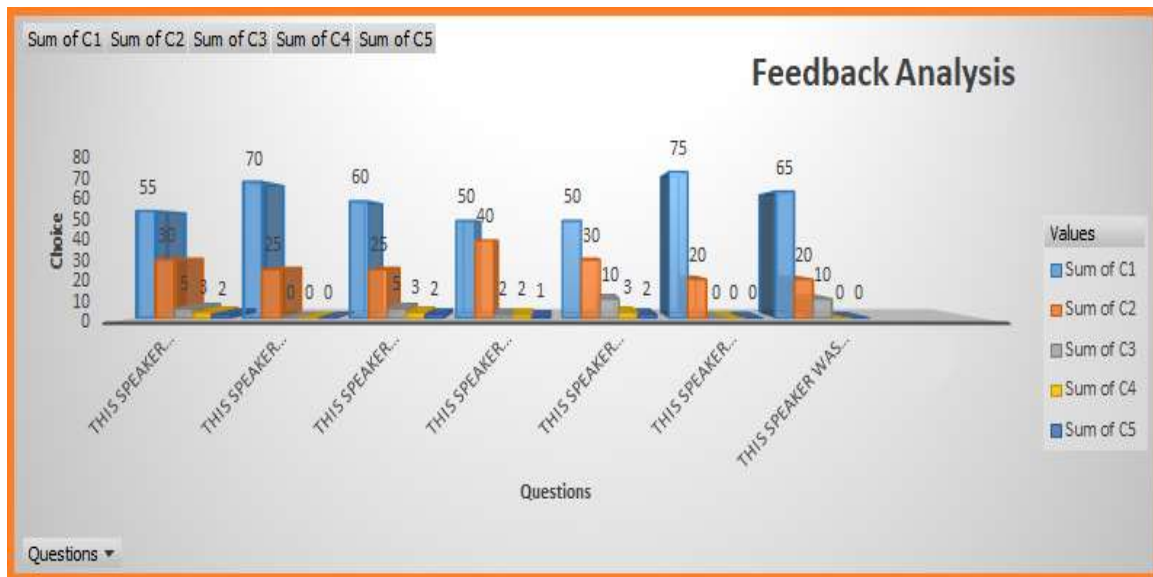
Where can I learn Ethical Hacking?

Any additional comments? (use the back if necessary)

I want to become an ethical hacker.

5 = Strongly agree, 4 = Agree, 3 = Neutral, 1 = Disagree, 0 = Strongly Disagree

Snapshot - Event Feedback



Snapshot - Event Feedback Analysis

2. Event - Technical Seminar on “Hands-on session in Ethical Hacking”

The Center for Cyber Security and Cloud Computing (C3 - Centre) conducted a “Hands-on session in Ethical Hacking” on May 07, 2022. The session was open to all students at the centre, and Dr. P. K. Nagarajan, the RIT Principal, inaugurated the session and welcomed the speaker, Mr. M. Sibivasan. The Speaker Mr. Sibivasan, Certified Ethical Hacker, addressed gathering on a cyber-security risk. Cybercrime has grown significantly since the emergence of the digital world. This has increased the importance of enterprises and international organizations ensuring that their cybersecurity is infallible. Speaker has highlighted the significance of ethical hacking.

Participants got the opportunity to discuss various cyber security issues and related strategies throughout the session. The following topics were covered: Application security, Network security, and Understanding and preparing for hacking threats. Feedback was collected at the end of the session, and an assessment quiz exam was conducted to ensure seminar understanding. Statistics on feedback and assessments are included.



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**Department of Computer Science and Engineering
&
CYBER SECURITY AND CLOUD COMPUTING CENTRE (C3)**

cordially invite you to the
Hands-On Session
in
Ethical Hacking



Resource Person

Mr. M. Sibivasan

EC-Council, Certified Ethical Hacker(C|EH)
IV-CSE/RIT/Chennai

Date: 7th May 2022

Time: 1:30 PM

Dr. D. C. Joy Winnie Wise
HoD-CSE

Dr. P. K. Nagarajan
Principal

Dr. Haree Shankar Meganathan
Vice Chairman

Join Zoom Meeting:

<https://zoom.us/j/98131929701?pwd=OVpMdDhLUXFWR3NhLzBSS2Fid1hsQT09>

Brochure – Technical Seminar

Event Photographs



Snapshot -Technical Seminar on “Hands-on session in Ethical Hacking”

Date: 07-05-2022

Attendance Sheet

Event Name: "Hands-On Session in Ethical Hacking"

S.No	Student Name	Register Number	Signature
1.	B. Sakthiprabakar	~~211720104124~~	
2.	D.T. Reketh	211720104119	
3.	S.B. Revanth	211720104118	
4.	D. Sanjay	211720104125	
5.	HARSH S.K	211720104063	
6.	Prasanna Kumar V	211720104103	
7.	THIRULOK R	211720104156	
8.	SENTHIL KUMAR B	211720104136	
9.	PRAVEEN R	211720104109	
10.	NISHAA S	211720104098	
11.	S.M. KARTHIK Raja	211720104071	
12.	M. Shanmugan	211720104066	
13.	A. Jagadeesh	211720104065	
14.	Jaideepak S. H	~~211720104067~~	
15.	Karthikeyan R	211720104079	
16.	Lakshmi P. J	211720104084	
17.	Ajunsiva S	211720104017	
18.	Aaradhya S	211720104015	
19.	Dorairam N. C. Daniel	211720104050	
20.	M. Harishanker	211720104060	
21.	Ahamed Akshan S	211720104007	
22.	Satish Babu R	211720104122	
23.	Shravan Kumar D	211720104131	
24.	Sasanya R	211720104123	
25.	Venkata Sai Deepa A	211720104161	
26.	Taran Kumar S	211720104154	
27.	Vishvesh S	211720104167	
28.	Santhosh Gurus R	211720104127	
29.	Santhosh R	211720104126	
30.	M.K. SUNDARA DAMODHARAN	211720104149	
31.	G. Bharath Kalyan	211720104029	
32.	S. Balakrishnan	211720104024	
33.	Hari Prashanth V	211720104061	

Snapshot - Event Attendance

Guest Speaker Evaluation Form

Speaker: Mr. M. Sibivasan, Ethical Hacker

Date: 07-05-2022

1. This speaker was interesting.

___ Strongly agree 4 Agree ___ Neutral ___ Disagree ___ Strongly Disagree

2. This speaker talked about something I didn't know already.

___ Strongly agree 4 Agree ___ Neutral ___ Disagree ___ Strongly Disagree

3. This speaker helped me learn about how marketing works in the real world.

___ Strongly agree 4 Agree ___ Neutral ___ Disagree ___ Strongly Disagree

4. This speaker provided information I can use to be successful in this class.

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5. This speaker provided information I can use to be successful in my career.

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___ Strongly agree 4 Agree ___ Neutral ___ Disagree ___ Strongly Disagree

7. This speaker should be invited back again.

___ Strongly agree 4 Agree ___ Neutral ___ Disagree ___ Strongly Disagree

8. What kind of questions do you have now that you wish had been answered by this speaker?

Any additional comments? (use the back if necessary)

5 = Strongly agree, 4 = Agree, 3 = Neutral, 1 = Disagree, 0 = Strongly Disagree

Sanjay D
2020 01 23

Snapshot – Event Feedback

EC- Council Certification Course

EC-Council recognized Rajalakshmi Institution of Technology as an authorized EC-Council Academia Partner for three years from **December 28, 2020 to December 28, 2023**. The EC-Council Academia Partner network is the premier partnership for delivering high-quality, authorized EC-Council Cyber security related academic courses.

Events conducted by EC – Council

S. No.	Name of the event	Date
1.	Two days EC-Council Certification Course on "CERTIFIED SECURE COMPUTER USER" for overall third year.	19.11.2021, 20.11.2021
2.	Two days EC-Council Certification Course on "CERTIFIED SECURE COMPUTER USER" for overall second year.	29.11.2021, 30.11.2021
3.	CSCU Certification Exam for faculties and Students	15.12.2021, 22.12.2021 23.12.2021, 24.12.2021, 1.06.2022

Many students and faculty members have registered for EC- Council Certification Course and got qualified as “CERTIFIED SECURE COMPUTER USER” (CSCU).

The Management, Principal, Staff and Students of



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Affiliated to ANNA UNIVERSITY.

cordially invite you to the
Two Days EC-Council Certification Course
on
CERTIFIED SECURE COMPUTER USER

organized by the **Department of Computer Science and Engineering**
in association with **EC- Council**



EC-Council



Mr. Jagadeesan Srinivasan

Master Trainer
Zybeak Technologies Pvt Ltd., Chennai.

has kindly consented to be the resource person

 **19th - 20th NOV 2021**  **9.00 AM to 1.00 PM & 2.00 PM to 6.00 PM**

Dr. Haree Shankar Meganathan
Vice Chairman

Dr. P.K.Nagarajan
Principal

Dr.D.C Joy Winnie Wise
HoD / CSE

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POONAMALLEE, CHENNAI - 600 124.
PH : 044 6718 1600 / 01 | MAIL: MAIL@RITCHENNAI.EDU.IN

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EVENT PARTICIPATED - PLI Blockathon

PLI (Plugin) in collaboration with XDC (XIN-FIN) a blockchain company conducted a Hackathon at Sathyabama University, Chennai (22/09/2022). It was a straight 32 hours hackathon where we need solve real-time problems with the integrity of Defi, Web3, NFT, Metaverse, etc. Finally, we have won **Rs. 50,000** rupees worth of XDC Tokens.

