



www.nfsu.ac.in

SCHOOL OF

# CYBER SECURITY AND DIGITAL FORENSICS

# NATIONAL FORENSIC SCIENCES UNIVERSITY



# A COUT NATIONAL FORENSIC SCIENCES UNIVERSITY

he National Forensic Sciences University (NFSU), erstwhile Gujarat Forensic Sciences University (GFSU) is the world's first and only University dedicated to forensic science and its allied subjects. This unique University was envisioned by Hon'ble Prime Minister of India Shri Narendra Modi as the then Hon'ble Chief Minister of Gujarat in 2008 to be an institution of higher learning of International standard and to meet the huge shortfall of experts in the different fields of forensic science across the world. It came into being on 11th February, 2009 at Gandhinagar, Gujarat with the appointment of Dr. J.M. Vyas as its first Director General. On 1st October 2020, the Government of India elevated the university into a National University and established NFSU through National Forensic Science University Act. Simultaneously, NFSU has also been accorded the status of an institution of national importance (INI). On upgradation, the erstwhile GFSU has become the Gujarat campus of NFSU and the Lok Nayak Jayprakash Narayan- National Institute of Criminology and Forensic Sciences (LNJN-NICFS) at Rohini, New Delhi as another campus. Seven more campuses/academy have been set up at Goa, Tripura, Maharashtra, Madhya Pradesh, Assam, Manipur and Karnataka. The headquarter of NFSU continues to be located at its ultra modern and lush green campus at Gandhinagar, the capital city of a vibrant and industrious state of Gujarat.

The university comprises of various schools and centres spread across wide ranging academic disciplines of Forensic Science, Cyber Security and Digital Forensics, Behavioural Sciences, Forensic Psychology, Engineering and Technology, Pharmacy, Management Studies, Police Science and Security Studies, Medico-Legal Studies, Law

Forensic Justice and Policy Studies, Doctoral Studies and Research, and Open Learning. Presently, the university offers more than 70 post-graduate as well as integrated courses. Besides this, it undertakes a variety of short-term training programs for the officers from diverse fields such as police, judiciary, prosecution, armed forces, academics, finance, banking etc. As a result since 2009, NFSU has trained over 25000 officers, including more than 5000 officers from 75 different countries. In order to harness the latest knowledge, advanced technology and the best practices, NFSU has entered into academic collaboration across the world and within India with more than 130 multi-discipline institutions.

One of the unique features is that it offers expert consultancy in setting up or upgrading various laboratories in the country as well as abroad. The university boast of some unique and state-of-the- art infrastructure, which includes the Center of Excellence in Cyber Security (erstwhile Cyber Defence Centre (CDC)), the Ballistics Research Centre & Testing Range (BRCTR), Centre of Futuristic Defense Studies, International Centre for Humanitarian Forensics (ICHF) in collaboration with ICRC, Center of Excellence DNA forensics, Center for Happiness & Well-being (CHWB), Forensic Innovation Centre, Centre of Excellence for Narcotic Drugs and Psychotropic Substance (NDPS), Center of Law and Emerging Technologies, Center of Excellence Advance Digital Forensics etc.

NFSU is progressing under the dynamic leadership of its founder Hon'ble Vice Chancellor, Padma Shri Dr. J.M. Vyas, a globally renowned and senior most forensic scientist of India with a rich experience of five decades in this field. The highest body of the University is the Board of Governors with the Vice Chancellor as its chairman.

#### MESSAGE FROM HON'BLE VICE CHANCELLOR

Dr. J. M. Vyas

Vice-Chancellor

National Forensic Sciences University



t gives me immense pressure to share that the National Forensic Sciences University has been scaling new heights since its inception and emerged as a premier global institution in the Forensic Sciences with a status of Institution of national importance. The university started with a mission to strengthen the criminal justice delivery system and make our society a safer place to live. With the ever-increasing reliance on a digital platform and exponential rise in the cyber threats, cyber security and digital forensics have become integral components of the organisation's security policy. As a major step towards cyber-forensic capacity building and promote quality research and development in this highly specialised domain, the School of Cyber Security and Digital forensic has been established which conducts nine academic programs that covers various facets of cyber security and Digital forensic with an aim to provide the much needed workforce and fulfill the increasing demand of cyber-forensic experts.

We look forward to welcoming you to the School of Cyber Security and Digital Forensics and to be a part of National Forensic Sciences University family contemplating to achieve Vasudhaiva Kutumbkam.

#### MESSAGE FROM CAMPUS DIRECTOR

Prof. Dr. Purvi Pokhariyal

Campus Director, Gandhinagar

National Forensic Sciences University



am pleased to share this brochure with you to unlock the path to advance learning in the domain of cyber security in digital forensics, with a vision to empower students with cyber security and digital forensics education, intensive training, and hands-on practical experience. We offer cyber forensic programs reflecting contemporary trends, through theoretical and application based learning in our courses for Cyber forensic students. The aim is to transform the learning experience and enhance human resource skilling across academic, industrial, public, and private organisations.

The idea is to enhance critical thinking and problem solving skills and match the standards of the market and industry requirements. We have state-of-the-art infrastructure and experienced faculty who are consistently engaged in teaching and research. We envision providing advanced solutions to complex problems using cyber forensic best practices, standards, compliances and technical framework.

Our academic program includes courses, seminars and international conferences, all aiming to cater to wide ranging challenges and needs present in the employment sector. Our specialist training programs, domains specific workshops, and lectures on niche subjects stem from years of experience, creativity and innovation. I am confident that our attempt to build a strong connection between theory, academics and practical training will be meaningful for everybody.

All the best in your learning journey. I look forward to your association with NFSU.

#### MESSAGE FROM DEAN



#### Prof. (Dr.) Naveen Kumar Chaudhary

Dean, School of Cyber Security and Digital Forensic National Forensic Sciences University

yber Security has become more important than ever in today's Digital Lifestyle. There is a growing reliance on digital platforms for e-Governance and business continuity. This has resulted in the increased access and reach of digital services; however, the threat of cyber-attacks has also intensified significantly. The global cybersecurity threat landscape has grown complex with the use of sophisticated tools and technologies by the cyber-criminals and non-state actors. The management of cyber incidents is an intricate process and demands technical acumen of high standard. The demand of cyber analysts and forensic investigators has grown manifold in the recent years; however, there is a huge shortage of human resources that is available in this domain. Keeping in mind, the growing complexity of the Cyber threat landscape and digital forensic investigation capabilities that are required to investigate such sophisticated cyber-crimes, National Forensic Sciences is one of the pioneers in establishing the School of Cyber Security and Digital Forensics which offers array of highly specialised Undergraduate and Post Graduate Programmes in Cyber Security and Digital Forensics with an aim to create best of the talent pool and specialised workforce to fulfil the acute shortage of Cyber-Forensic experts.

The School has the best training infrastructure at par with global standards. The Center of Excellence in Cyber Security (erstwhile Cyber Defence Centre (CDC)) at Gandhinagar is the first-ever ISO/IEC 27001 Certified Laboratory in India with advanced Cyber Range capabilities and covers a wide spectrum of use-cases on Information Communication Technology (ICT), Operational Technology (OT) and Internet of Things (IoT). The vision is to train future Cyber-security leaders who can contribute effectively towards the Cyber-security capacity building of the nation. Towards that, the School is focusing on four main areas, which are, advanced lab work for students, Research & Development, Innovations and technical acumen to investigate the security breaches.

School of Cyber Security and Digital Forensics will be happy to make you realise your dream of becoming an expert in the niche area of Cyber-security and Digital Forensics. The faculty and staff at the School will handhold you and take you through a transformative process to equip you with the right skill sets and knowledgebase to become a successful Cyber-forensic professional.

We look forward to welcoming you to the School of Cyber Security and Digital Forensics at National Forensic Sciences University and to be a part of our family.

"Never say no; never say I cannot, for you are infinite. All the power is within you and you can do anything with education" .......... Swami Vivekananda



# SCHOOL OF CYBER SECURITY AND DIGITAL FORENSICS

he digital technology evolution has enhanced the efficiency of the people, process and technology. With the acceptance of digital technology among the masses, cyberspace has grown in reach and magnitude. The expansion of digital space has also made cyberspace vulnerable to cyber-attacks. The availability of higher bandwidth and processing capabilities have revolutionized the entire Information Communication Technology (ICT) sector; however, it has also posed serious cyber security challenges due to the lack of security standards and gaps in design architecture. The threat landscape has turned complex and cyberspace has emerged as the fifth realm of warfare. The cyber security breaches in the modern era have serious security and financial implications. The healthy cyberecosystem demands safeguards with appropriate security controls, right skill set and technical acumen to investigate the cyber breaches for attack attribution with forensic approach.

With the diverse technologies coming to the fore and opportunities offered by the emerging technologies like Artificial Intelligence, Machine Learning, Distributed Ledger Technologies, Internet of Things etc., a higher skill set and trained human resource is the need of the hour in the highly specialised domain of Cyber-forensics.

National Forensic Sciences University is among the first few educational institutions in India that realized this crucial requirement well in advance and established School of Cyber Security and Digital Forensic that conducts a full-fledged undergraduate and masters programmes in Cyber Security and Digital Forensics with an aim to full-fill the acute shortage of Cyber Forensic experts at national as well as global level. The School has the best training infrastructure at par with global standards. The Center of Excellence in Cyber

Security (erstwhile Cyber Defence Centre (CDC)) at Gandhinagar is the first-ever ISO/IEC 27001 Certified Laboratory in India where cutting-edge Cyber-Forensic tools are integrated on a single platform to impart quality teaching to students and offer research, development and innovation opportunities of a very high order. The state-of-the-art Cyber-Forensic Labs in the school are established with a vision to expose students to all the postures of cyber-security in a simulated lab environment and train future cybersecurity leaders who can contribute effectively towards the cyber security capacity building of the nation. The School aspires to offer a practical-driven quality education in Cyber Security and Digital Forensics based on sound theoretical principles while creating a conducive ambience and atmosphere for intellectual stimulation, thereby developing the overall personality of the students, instilling high level of discipline, making students technologically superior and ethically strong.



To educate and train students in Cyber-Forensics and prepare the workforce so as to strengthen the criminal justice delivery system and make society a safer place to live.



To enhance capabilities in the niche areas of cyber security and digital forensics by developing teaching, research and consultancy infrastructure at par with international standards and play a leading role in the national cyber security and digital forensic capacity building.



# PROGRAMS OFFERED IN THE SCHOOL OF

Sr. No.	Program	Duration	Numbers of Seats	Offered at Campus
1.	M. Sc. Digital Forensics and Information Security	2 Years	Gandhinagar - 40 Delhi - 40 Goa - 20	Gandhinagar, Delhi, Goa

#### About the Program \_\_\_\_\_

The M.Sc. Digital Forensics and Information Security popularly known as M. Sc. DFIS is one of the oldest programs offered by the university. This 2-year full time program focuses on developing core knowledge on Computer Forensics, Incident Response Management, Malware Analysis & Forensics, Mobile Forensics, Web Application Security, Network Security and other advanced topics. In the course, students learn the essence of Digital Forensics and Information Security which provide necessary skills to handle the digital forensic examination based on sound principles of digital investigation techniques and securing information systems at a large.

#### Eligibility Criteria \_\_\_\_\_

B.E./B.Tech. in all Engineering/Technology Branches OR B.Sc. (Information Technology (IT)/Computer Science (CS)/Electronics) OR Bachelor of Computer Application s (BCA) OR B.Sc. Forensic Science in Cyber Forensic / Digital Forensics / Computer Forensics/OR equivalent qualification from recognized University with minimum 55% (50 % in case of SC / ST / PWD Candidates) at the qualifying examination.

Sr. No.	Program	Duration	Numbers of Seats	Offered at Campus
2.	MTech. Cyber Security	2 Years	50 Seats	Gandhinagar

#### About the Program \_\_\_\_\_

One of the highly demanding programs offered by the school is M. Tech. Cyber Security. The program is technical and practical in nature, uniquely embedded in industry, and develops in-depth expertise of core technical topics within the area of cyber security and digital forensics such as secure programming, network security, penetration testing, malware analysis, mobile security and forensics, IT law and ethics, and technologies and tools that support application and service vulnerability detection, incident detection, data and log retrieval and analysis. The program also provides a sharper focus into forensics through computer forensics and the elective subjects offered to the learners are highly specialized and advanced in nature such as Drone Forensics, Blockchain Application Security and Investigation, IoT Security and Forensics and Critical Infrastructure Security.

#### Eligibility Criteria \_\_\_\_\_

B.E./B.Tech. in Computer Engineering/Technology OR Computer Science and Engineering OR Information Technology Engineering OR Information and Communication Technology OR Electronic and Communications Engineering OR MCA OR M. Sc. CSE /IT OR equivalent qualification from recognized University with minimum 55% (50% in case of SC / ST / PWD Candidates) at the qualifying examination.B.E./B.Tech. in Computer Engineering/Technology OR Computer Science and Engineering OR Information Technology Engineering OR Information and Communication Technology OR Electronic and Communications Engineering OR MCA OR M. Sc. CSE /IT OR equivalent qualification from recognized University with minimum 55% (50% in case of SC / ST / PWD Candidates) at the qualifying examination.



# CYBER SECURITY & DIGITAL FORENSICS

Sr. No.	Program	Duration	Numbers of Seats	Offered at Campus
3.	M.Sc. Cyber Security	2 Years	Gandhinagar - 50 Goa- 30	Gandhinagar, Goa

#### About the Program \_\_\_\_\_

The M. Sc. in Cyber Security program of the school aims to provide the expert technical knowledge, competence, and research skills of the most crucial technical concepts of cyber security as well as digital forensics. The program is designed to cater the needs of every increasing cyber security professional. It focuses on various skills which can be applied in the fields like Vulnerability Assessments and Penetration Testing (VAPT), Network Security, Mobile Security, and digital forensics, as well in the emerging fields like Artificial Intelligence based Security, Critical Infrastructure Security, Blockchain Technology, and IoT Security.

#### Eligibility Criteria \_\_\_\_\_\_

B.E. / B.Tech. in Computer Engineering (CE) / Technology OR Computer Science and Engineering (CSE) OR Information Technology (IT) OR Information and Communication Technology (ICT) OR Electronics and Communication (EC) OR B.Sc. (Information Technology (IT)/Computer Science (CS)/Electronics) OR Bachelor of Computer Application (BCA) OR equivalent qualification from recognized University with minimum 55% (50 % in case of SC / ST / PWD Candidates) at the qualifying examination.

Sr. No.	Program	Duration	Numbers of Seats	Offered at Campus
4.	B.TechM.Tech. Computer Science & Engineering (Cyber Security)	5 Years (10 Semesters)	Gandhinagar - 40 Delhi - 40, Tripura - 30 Dharwad - 30	Gandhinagar, Delhi, Tripura, Dharwad

#### About the Program \_\_\_\_\_

The only integrated program in the niche area of cyber security offered by the school is B.Tech – M.Tech Computer Science and Engineering (Cyber Security). This is a 5 year integrated program in which the students earn a degree in technology with a specialization in Cyber Security. The program aims to provide computer science, programming, mathematics and cyber security knowledge and expertise to students. The students will learn the basic aspects of Computer Science and Engineering in this program and graduate as Cyber Security experts after completion of the degree.

#### Eligibility Criteria \_\_\_\_\_

Passed or appeared in 10+2 (or its equivalent) in Physics and Mathematics as compulsory subjects along with one subject out of Chemistry / Biology / Information Practices / Biotechnology / Technical Vocational Subjects / Business Studies / Entrepreneurship or any other equivalent subjects with a minimum of 60% marks (55 % for SC/ST/PwD category) in the above subjects taken all together (aggregate). 60% aggregate will be calculated on the basis of marks of Physics, Mathematics and maximum marks secured in Chemistry or Biology or Information Practices or Biotechnology or Technical Vocational Subjects or Business Studies or Entrepreneurship or any other equivalent subjects.



# PROGRAMS OFFERED IN THE SCHOOL OF

Sr. No.	Program	Duration	Numbers of Seats	Offered at Campus
5.	P G Diploma in Cyber Crime Investigation	1 Year	20	Manipur Academy

#### About the Program \_\_\_\_\_

The PG Diploma in Cyber Crime Investigation is a one (01) year post graduate diploma program. This program is presently offered from Manipur Academy of the university. This One-year (Two semesters) program is a highly sought program by the working professionals and aspiring students. The curriculum of the program aims on skill building in the areas like Mobile Forensics, Digital Forensics, and other investigating methods of cyber crimes.

#### Eligibility Criteria \_\_\_\_\_

B. E. / B. Tech. in Computer Engineering (CE) / Technology OR Computer Science and Engineering (CSE) OR Information Technology (IT) OR Information and Communication Technology (ICT) OR Electronics and Communication (EC) OR B.Sc. (Information Technology (IT) / Computer Science (CS) / Electronics) OR Bachelor of Computer Applications (BCA) OR equivalent qualification from recognized University with minimum 55% (50% for SC/ST/PwD candidates) in the qualifying examination.

Sr. No.	Program	Duration	Numbers of Seats	Offered at Campus
6.	P G Diploma in Cyber Security	1 Year	20	Pune Academy

#### About the Program \_\_\_\_\_

The school also offers a PG Diploma in Cyber Security. This One (01) year post graduate diploma program is currently offered from the Pune Academy. The aim of this program is to provide learners with essential technical knowledge, competence and research skills in cyber security and as to how this can be applied in the emerging areas related to security and forensics of cyberspace.

#### Eligibility Criteria \_\_\_\_\_

Candidates must have obtained a bachelor degree from a recognized university.

Sr. N	No.	Program	Duration	Numbers of Seats	Offered at Campus
7.		P G Diploma in Cyber Physical System	1 Year	20	Gandhinagar

#### About the Program \_\_\_\_\_\_

This one-year diploma program is designed to provide vital knowledge for building a dynamic and resilient cyber physical system and it will leverage the skills of future technocrats to compete the real-world challenges with core domain knowledge as per industry demand. This program mainly focuses on realization of Cyber Physical Systems using futuristic technologies such as Internet of Things, Artificial Intelligence and Cloud Computing along with core fundamental subjects of security and forensics which are required to maintain secure operation of businesses. It will also control employability issues by enhancing the technical skills of working professionals in a short span of time which will ultimately lead to growth of an individual and society at large.

#### Eligibility Criteria \_\_\_\_\_

B. E. / B. Tech. in Computer Engineering (CE) / Technology OR Computer Science and Engineering (CSE) OR Information Technology (IT) OR Information and Communication Technology (ICT) OR Electronics and Communication (EC) OR B.Sc. (Information Technology (IT) / Computer Science (CS) / Electronics) OR Bachelor of Computer Applications (BCA) OR equivalent qualification from recognized University with minimum 55% (50% for SC/ST/PwD candidates) in the qualifying examination.

# **CYBER SECURITY & DIGITAL FORENSICS**

Sr. No.	Program	Duration	Numbers of Seats	Offered at Campus
8.	PG Diploma Semiconductor Security and Forensic Investigation	1 Year	20	Gandhinagar

#### About the Program \_\_\_\_\_

A specialized academic course structure is proposed by the school to deal with the scenario of semiconductor security and forensics. This course is well equipped with academic courses and hands-on experiments as a bridging between the existing semiconductor technology and futuristic advancement to accommodate security challenges. Course is designed to develop understanding about and to detect unidentified hardware through logical and physical mechanisms. The course will culminate into the high-end central facility for semiconductor security and forensics that may lead to endorse techno-legal framework and further advanced degree courses to train the quality human resource and to develop quality infrastructure about semiconductor security in the country.

#### Eligibility Criteria \_\_\_\_\_

Bachelor's Degree B.Tech (Any Engineering Discipline), B.Sc / M.Sc (Physics/Electronics/ IT/computer science) with minimum 55% marks (50% marks in case of candidates belonging to reserved category) in the qualifying examinations.

Sr. No.	Program	Duration	Numbers of Seats	Offered at Campus
9.	M. Tech. Artificial Intelligence and Data Science (Specialization in Cyber Security)	2 Year	18	Goa

#### About the Program \_\_\_\_\_

Artificial Intelligence and Data Science (AI & DS) are rapidly evolving technology and applications with major implications for economies and societies. As the demand for such applications increases, there is also an increasing need for building the future workforce for AI & DS. The M. Tech in AI & DS program offered by the school aims at deep knowledge of both fundamental AI technologies, as well as application-oriented AI for cyber security. As cyberattacks grow in volume and complexity, artificial intelligence (AI) is helping under-resourced security operations analysts stay ahead of threats. Curating threat intelligence from millions of devices, AI technologies like machine learning and natural language processing provide rapid insights to cut through the noise of daily alerts, drastically reducing response times. A student completing this program will be capable of undertaking careers in industry as well as academia.

#### Eligibility Criteria \_\_\_\_\_

B.E./B.Tech. in Computer Engineering/Technology OR Computer Science and Engineering OR Information Technology Engineering OR Information and Communication Technology OR Electronic and Communications Engineering OR MCA OR M. Sc. CSE/IT OR equivalent qualification from recognized University with minimum 55% (50% in case of SC/ST/PWD Candidates) at the qualifying examination.



#### Facilities and Resources

# **Centre of Excellence in Cyber Security**

## (Cyber Defense Centre)

Cyber Security threats have become more complex, targeted, and persistent; they pose a serious challenge to the IT infrastructure of an organization and nation. The security of hardware and software products alone are insufficient to stop the advanced attacks. Modern cyber defenses demand proactive security operations by highly skilled personnel with the experience and expertise to detect and mitigate sophisticated threats. In order to take care of such challenges and also to create a defence mechanism system with regards to cyber threats, NFSU has established a first of its kind Cyber Defence Centre having all the cutting edge technologies required for this purpose.



### **Unique Features of CoE CS:**

- The first-ever ISO/IEC 27001 Certified Laboratory in India with the United Kingdom Accreditation Service (UKAS) Accreditation.
- Unique setup with cutting-edge tools and technologies integrated on a single platform to provide teaching, training, research and consultancy activities.
- In addition to Information Communication Technology (ICT), two important Cyber verticals Operational Technology (OT) and Internet of Things (IoT) are recently integrated on the existing platform.
- Imparting hands-on training to higher education students, and special training to government officers, police and cyber security experts from more than 70 countries.
- Well qualified and trained faculty members with ISO / IEC 17025 certifications, providing advanced Cyber-Forensic investigation support to some of the most prestigious organizations in India and abroad.
- Supports innovative start-ups in the field of Cyber Forensics to convert high quality research into functional products like Cyber Kiosk and Mobile OT Audit kits under the theme of "Atma Nirbhar Bharat".



# IoT Lab

With recent advancement in Mobile and Information technologies, the embedded systems are paving the way for the next revolution in computing. Accordingly, technology trends across the globe are pointing in the direction of Ubiquitous computing, Cloud Computing, IoT and SCADA. Internet of things (IoT) provides IP connectivity to various "Things" apart from general Desktops, Laptops and Mobile Devices. The term "things" means any physical parameter that could be sensed and connected to the Internet.

The IoT Lab established in the School of Cyber Security and Digital Forensics consist of various devices ranging from connectivity motes to firmware penetration testing modules. With the advent of Internet of Things, applications are limitless and there is a huge scope of research & development and aiming for the same, the school of cyber security and digital forensics through its IoT- Lab focuses on building automation to effectively deliver solutions, integrated RF Modules, figuring the various security loopholes (software & hardware) on the IoT Devices viz. IP Camera, Smart Bulb, etc.... The range of modules included in IoT-Lab Kit:



- Wi-Fi Mote
- UbiSense
- WINGZ Mutli-Gateway Protocol
- Various Sensors & Actuators

- BLE Mote
- Ubimote
- Debugger

The School of Cyber Security & Digital Forensics also focuses on the cutting edge technologies and to provide training and hands-on on the recent challenges of wireless sniffers, binary exploitation, Radio Reversing, Hardware Hacking, etc.

# **Digital Forensic Laboratories**

The Digital Forensic laboratories are equipped with high-performance computers having non-stop high-speed Internet connectivity. Each student gets a separate computer for academic and research work during the course duration. The best forensic software used across the world including EnCase, FTK, UFED, Disk Imager, Write Blockers, Password Recovery Toolkit, Data Recovery and Carving utilities, Multimedia Forensics tools and many equivalent open-source tools related to Digital Forensics are made available for the students.



#### **High End Computer Laboratory - 07**

School has seven high end computer laboratory dedicated for full time use of SCSDF students with configuration with intel i7 processor, 32GB RAM, 500 GB SSD, 1TB HDD of 180 HP systems and laboratory also have 120 Dell systems of intel i9 processor, 32GB RAM, 1TB SSD, 1TB HDD.





Name Dr. J. M. Vyas

Designation Vice Chancellor, NFSU

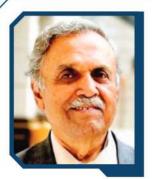
Ph.D Qualifications Experience 50+ years Awards and · Padma Shri

 President's Medal (1997) Achievements

Commendation Certificate for the Best Forensic Science Laboratory Director

· Lifetime Achievement Award in Forensic Chemistry

E-mail Address vc@nfsu.ac.in



Name Prof. (Dr.) S.S. Iyengar

Designation Distinguished Chair Professor, NFSU and Ryder Professor and Director,

School of Computing and Information Sciences, Florida International

University.

Qualifications Ph.D. from MSU, U.S.A.

Experience 45+ Years

**Publication** Research Paper: 600, authored/co-authored and edited books: 26 Research Area

Computational Medicine, Bioinformatics, Artificial Intelligence, and

Bio-Computing, Distributed Sensor Networks

Achievements / Appreciation

· Lifetime Achievement Award for contribution to the field of Digital Forensics (2022) • Outstanding Research Award for Test of Time Research and Scholarly Contribution from IEEE Congress on Cybermatics, (2019)

• IEEE Intelligence and Security Informatics (ISI) Research Leadership Award for his contribution in the area of distributed sensor systems

(2019)

**E-mail Address** iyengar@cs.fiu.edu



Awards and Achievements

Name Prof. (Dr.) Naveen Kumar Chaudhary

Designation Dean & Professor, Courtesy Research Professor,

Knight Foundation School of Computing and Information Science,

Florida International University, Miami, USA

PhD, ME, MBA, B.Tech Qualifications

Experience

Specialization Cyber Security, Digital Forensics, e-Governance

**Publication** Research Papers: 40, Authored/ co-authored and edited books: 03

Book Chapter: 01

Research Area Drone Forensics, Dark-net Investigation, IoT Security & Forensics,

OT Security & Forensics, Next Generation Network Security, Cyber Crime Investigation

- Dubai SEWA Award for contribution towards Cyber Security Education(2022),
- Chairman Chief of Staff Committee Commendation(2015)
- Chief of Army Staff Commendation(2009)
- · Letter of appreciation for contribution towards the cause of literacy from Brent St. Denis, MP, Algoma, Canada(1994)
- Editor-in-chief NFSU International Journal of Cyber Security and Digital Forensics,
- Best paper award, ISISPD Goa, 2-3 Dec 2022.

naveen.chaudhary@nfsu.ac.in E-mail Address



Name Dr. Parag H. Rughani Designation Associate Professor Qualifications M.C.A., M. Phil., Ph. D.

21 Years Experience

Specialization Digital Forensics and Cyber Security

Publication Research Paper: 30, Books: 01, Book Chapter: 01

Research Area Memory Forensics, Machine Learning, Malware Analysis and OSINT

E-mail Address parag.rughani@nfsu.ac.in



Name Dr. Digvijaysinh Rathod

Designation Associate Dean and Associate Professor

Qualifications PhD, MCA Experience 17 years

Specialization Cyber Security and Digital Forensics Publication Research Papers: 21, Books: 3

Research Area - ICS/SCADA Security, IoT Security, Mobile Security, Web Security

E-mail Address digvijay.rathod@nfsu.ac.in



Name Dr. Nilay R. Mistry Designation Associate Professor Qualifications Ph.D, MTech, BE

13 Years Experience

Specialization

Research Area

Achievements

Publication Research Paper: 22

Computer Forensics, Cyber Security, Malware Forensics, OSINT,

Social Network Forensics, Drone Forensics, Dark Web Forensics,

**Memory Forensics** 

Awards and Ambassador of Indian Cyber Crime Investigator Issued by Global

Cyber Crime Helpline Award-(2019)

Digital Forensics and Cyber Security

E-mail Address nilay.mistry@nfsu.ac.in



Name Mr. Dharmesh D. Dave

Designation Assistant Professor

Qualifications M.Tech. B.E. Experience 6 Years

**Specialization** Cyber Security Audit & Compliance Malware Analysis,

Incident Response, ICS/SCADA Security, Digital Forensics

Publication Research Papers: 03

Research Area Android Malware Detection, Malware Analysis, Cyber Security Policies and Strategies,

Cyber Physical System Security, Digital Forensics

E-mail Address dharmesh.dave@nfsu.ac.in



Name Mr. Sarang Dilipkumar Rajvansh

**Designation** Assistant Professor

**Qualifications** M. Tech. **Experience** 3 Year

Specialization Computer Forensics, Mobile Forensics, Drone Forensics,

Image Processing, Cyber Crime Investigation

Research Area Drone Forensics, Computer Forensics, Mobile Forensics,

Chip-off, JTAG

E-mail Address: sarang.rajvansh@nfsu.ac.in



Name Dr. Pratik Patel

Designation Assistant Professor

Qualifications PhD, M.Sc (IT)

Experience 12 Year

**Specialization** Digital Forensics

**Publication** Research Paper: 05, Book: 01

Research Area Mobile Forensics

E-mail Address pratik.patel@nfsu.ac.in



Name Mr. Nilesh Panchal
Designation Assistant Professor
Qualifications M.Sc., B.Sc. (IT)

Experience 4 Years

**Specialization** Computer & Mobile Forensics,

Network Security and Forensics

Research Area Digital Forensics and Cyber Crime Investigations

E-mail Address nilesh.panchal@nfsu.ac.in



Name Mr. Prakash Khasor

Designation Assistant Professor

Qualifications M.Sc., BCA Experience 4 Years

Specialization Application Security (Web and Mobile),

Digital Forensic and Dark-web and Cryptocurrencies Investigation

Research Area Blockchain and IoT Authentication

E-mail Address prakash.khasor@nfsu.ac.in



Name: Dr. Parag C. Shukla

Designation: Assistant Professor

Qualifications: Ph.D., M.C.A.

Experience: 14 Years

Specialization: Programming, Database, Data Science, Cyber

Security, Mobile Security, Mobile Forensics,

Malware Analysis

Publication: Research Paper: 21, Book: 01

Research Area: Big Data, Data Mining, Data Science,

Mobile Security, Malware Analysis, Mobile forensics

• Best Performance Award • Top Performing Mentor by NPTEL in C Programming
• Gold Medal in Java by NPTEL • Top Performing Mentor by NPTEL in Python for Data Science,

E-mail Address: parag.shukla@nfsu.ac.in



Name Dr Mukti Padhya

Designation Assistant Professor

Qualifications Ph.D., M.Tech, B.E.

Experience 7 Years

**Specialization** Cryptography and Information Security, Cloud Security

Publication Research Paper: 11

Research Area Awards & Achievements Cryptography and Information Security, Cloud Security, Cloud Forensics, Al

• MHRD Fellowship from 2012-2014 • Gold Medal for highest CGPA in M.Tech from S. V. NIT Surat in 2014

• Visvesvaraya Fellowship by Ministry of Electronics & Information Technology (MeitY) from 2015-2020

E-mail Address mukti.padhya@nfsu.ac.in



Name Dr. Ujjaval Patel

Designation Assistant Professor

Qualifications B.E., M.E., Ph.D.

Experience 20 Years

Specialization IoT Security & Forensics

Publication Research papers: 12, Book: 01

Research Area IoT Security in Industry 4.0, Internet of Vehicle,

**Smart Grid Security** 

Awards & Achievements

• Best Paper Award in IEEE Sponsored International Conference at NIT - Jamshedpur in February 2021.

• Best Paper Award in International Conference at Pandit Deendayal Energy University,

Gandhinagar in September 2021

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Name Dr. Ahlad Kumar
Designation Assistant Professor

**Qualifications** Post Doc, PhD, M. Tech, B.Tech

Experience 13 Years

**Specialization** Computer Science and Electronics

**Publication** Research Papers: 34

Research Area Deep Learning, Machine Learning and Image Processing for

Cybersecurity, Natural Language Processing

Awards & Achievements

Horizon Fellowship for Post Doc, Concordia University, Canada

• Full scholarship during PhD from University of Malaya, Malaysia

· M.Tech Gold Medalist

• Best Paper Award in M. Tech

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Dr. Vijeta Khare Name Designation Assistant Professor Qualifications PhD, M. Tech, B.E.

Experience 12 Years

Achievements

Specialization Computer Vision, Image Processing

Publication Research Papers: 17

Research Area Computer Vision, Image Processing, Multimedia Forensic Awards & Researcher at Concordia University, Canada

• Full scholarship during PhD from University of Malaya, Malaysia

• MHRD Fellowship from 2006-2008

· M. Tech Topper at ABV-IIITM, Gwalior

**E-mail Address** vijeta.khare@nfsu.ac.in



Dr. Jay B Teraiya Designation Assistant Professor

Qualifications Ph.D., M. S., B. E., Diploma in Computer Engineering

Experience

Specialization Scheduling Optimization, Swarm Intelligence, Real Time Operating System, Software Engineering, NLP

**Publication** Research Papers: 10, Book: 01

Research Area

Scheduling Optimization, Swarm Intelligence, Real Time Operating System, Software Engineering, NLP

E-mail Address jay.teraiya@nfsu.ac.in



Name Dr. Reena Patel Assistant Professor Designation

Qualifications PhD Experience

13 years

Specialization

Mathematics

**Publication** 

Research Papers: 10

Research Area

Operations Research (Transportation Problem)

E-mail Address

reena.patel@nfsu.ac.in



Name Dr. Lavi Tyagi Assistant Professor Designation Qualifications M.Sc, Ph.D

Experience 2 Years Specialization III-V Devices, Nanophotonics, Plasmonics, Photodetectors.

Publication Research Papers: 13 Research Area

Nanophotonics, Metamaterials, Microelectronics,

Awards & Achievements Semiconductor Security & Forensics.

• University Gold Medal (M.Sc. Electronic Science, Kurukshetra University) · Institute Postdoctoral Fellow at CRNTS, IIT Bombay, Mumbai.

Awarded DST-INSPIRE Fellowship

E-mail Address lavi.tyagi@nfsu.ac.in



Name Mr. Ramya Shah Designation

Teaching & Research Assistant

Qualifications M.Tech, B.Tech.

4 Years Experience

Specialization Incident Response Management, ICS/SCADA Security &

> Forensics, Digital Forensics (Mobile Forensics & Computer Forensics), Mobile Security, Threat Hunting & Cyber Threat Intelligence

**Publication** Research Papers: 06

Research Area SCADA Security & Forensics, Cryptocurrency Investigation & Dark Web - DarkNet

Investigation, Drone Forensics, Threat Hunting, Malware Analysis & Reverse Engineering,

System & Application Security

Awards & Achievements Forensic Aptitute & Caliber Test - Cyber Forensics - Qualified

E-mail Address: ramya.shah@nfsu.ac.in



Name Ms. Param Ahir

Designation Teaching & Research Assistant Qualifications ME in Information Technology

Experience 3 years

Specialization Information Technology

**Publication** Research Papers: 5

Research Area Computer vision and natural language processing

Awards and Archived State level rank in Gujarat Technical university in **Achievements** Master of Engineering in Information Technology

E-mail Address param.ahir@nfsu.ac.in



Ankita Nevil Gandhi

Designation Teaching & Research Assistant

Qualifications M.E. Computer science and technology,

PH.D. Pursuing

Teaching - 15 years and 6 Months **Experience** Specialization Computer Science and Technology

**Publication** Research Papers: 6

Research Area Natural Language Processing, Artificial Intelligence

E-mail Address ankita.gandhi@nfsu.ac.in

# Training/ Conferences/ Workshops/ Seminars







# Training/ Conferences/ Workshops/ Seminars







# Training/ Conferences/ Workshops/ Seminars



INTERPOL Young Global Police Leaders programme at NFSU

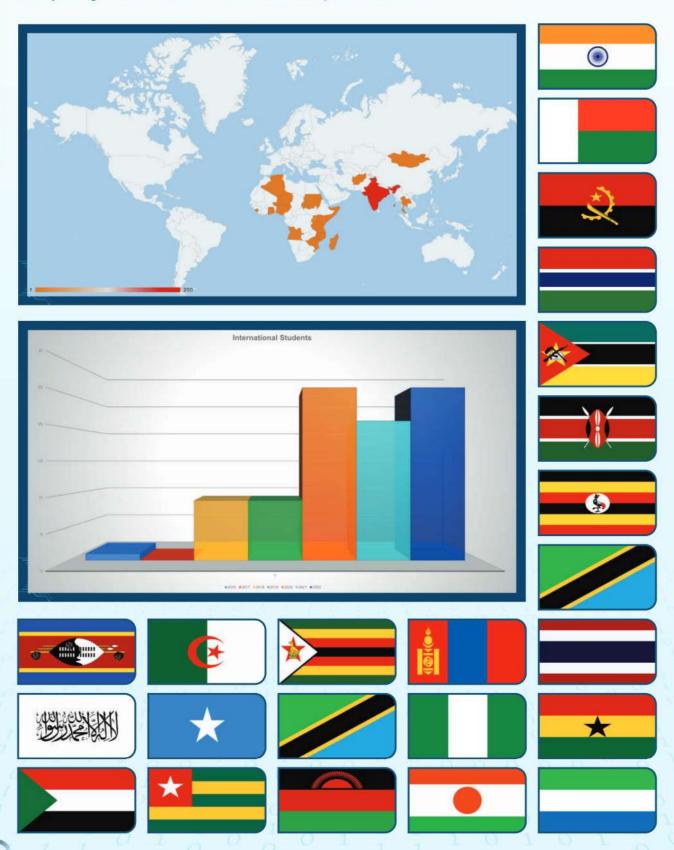




Women in Big Data Vidya Chapter launch at NFSU

# **INTERNATIONAL COLLABORATION**

School of cyber security and digital forensic has collaboration with many international partners. The students of the school recently worked for the prestigious Forensic Investigation Network for Digital Sciences (FINDS) centre of Florida International University, USA, during their internship on Drone Forensics. The students are encouraged to work in the niche area of Cyber Security and Digital Forensic in collaboration with international partner institutions.



# PLACEMENTS @SCSDF

he School of Cyber Security and Digital Forensics at National Forensic Sciences University has an integrated Placement Cell to create and provide a dynamic and inclusive platform that connects students with diverse career opportunities across various industry verticals. The cell aims to be a leading force in promoting and providing top quality Cyber Security & Digital Forensic professionals, well-placed influential alumni and has rightly earned its confidence amongst a variety of recruiters. The Placement Cell envisions a future where every student is empowered with the necessary skills, knowledge, and resources to succeed in their chosen profession. The placement cell strives to create a collaborative and supportive environment that fosters learning, growth, and success.

The Placement Cell at SCSDF, NFSU also provides Career Assistance by conducting various Industry – Academia meets from highly ranked officers and highly successful alumni to identify the necessity for various job roles and to act as a bridge between education and employment.

With the sheer enthusiasm and aim oriented approach, the placement department has consistently achieved more than 80% placements. The Placement cell is open to job roles specifying as SoC Analyst, Penetration Tester, Auditor, Network Engineer, Secure Source Code Reviewer, Cyber Security Engineer, Security Architect, Application Security Engineer, Information Security Manager, Threat Analyst and many more. The average package (CTC) ranges from 13 Lakhs to 14 Lacs, whereas the maximum package (CTC) achieved during the placement season 2022-23 is 68 Lacs.

The major recruiters for the students of Cyber Security are Microsoft, Atlassian, Nexdigm, Trellix, Qualcomm, Micron, Salesforce, Deloitte, ReBIT, PWC, KPMG, GMR, Reliance, HDFC Bank, Kotak Bank, Bank of America, ICICI Securities, Versa Networks, ICICI Lombard, ICICI Bank, CredAble, Armorcode etc.









# **STARTUP & INNOVATION ECOSYSTEM**

#### "INNOVATION IS BORN OUT OF CULTURAL EXCELLENCE." - Dr. APJ Abdul Kalam

yber Security and Digital Forensics is a growing field and with the ever-increasing reliance on digital platform, the reach and access of cyber criminals have also increased. There is a need to innovate indigenous solutions to tackle the investigation related to rising cyber crimes through cutting-edge tools and technologies.

The expert faculty and scientific staff at NFSU have created an innovative ecosystem to promote the R&D initiatives. The school under the umbrella of Forensic Incubation Centre has promoted and supported many Startup's led by the NFSU students.

The School provides support to researchers and start-up through expert knowledge-base, exhibitions and collaboration under the research initiatives of Cyber Defence Centre. The ultimate vision is to support these young minds to develop low cost indigenous Cyber-Forensic solutions and strengthen the capacity building of the nation through innovation and excellence in the field of Cyber Security and Digital Forensics.



























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