PROSPECTUS

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Center for Research and Technology

B.Tech

COMPUTER SCIENCE AND ENGINEERING

In Collaboration with

Microsoft

AJEENKYA D Y PATIL UNIVERSITY
THE INNOVATION UNIVERSITY

School of Engineering

MESSAGE FROM CEO'S DESK

Mr. Shankaran Chettur
CEO

In today's rapidly evolving digital landscape, staying ahead requires continuous learning and upskilling. At Veloces Center for Research & Technology, we are committed to empowering students and professionals with cutting-edge Technology courses designed for the new age. Our programs focus on emerging technologies such as Artificial Intelligence, Immersive Technologies, Cyber Security, Data Science and Machine Learning - equipping learners with the skills needed to thrive in the dynamic tech industry. Join us in embracing the future of IT education and unlocking new career opportunities.

Today, Veloces Center for Research & Technology is here at Ajeenkya DY Patil University offering B.Tech Computer Science and Engineering programs in collaboration with Microsoft.

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VELOCES CENTER FOR RESEARCH & TECHNOLOGY.

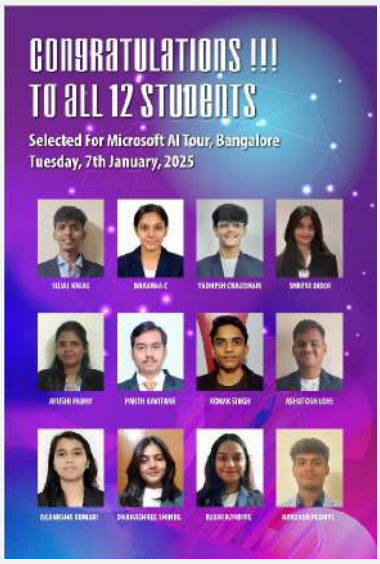
We help create educational institutions of tomorrow, today.

At Veloces, we help create educational institutions of tomorrow, today. We are committed to revolutionizing the education landscape by providing innovative solutions to universities, colleges, schools, training organizations, corporates, and students alike. As a forward-thinking education solutions provider, Veloces team is composed of seasoned professionals with a deep understanding of both academia and industry dynamics. Our consultants bring in a wealth of experience in education, technology and business, enabling us to offer holistic solutions that cater to the evolving needs of educational institutions and students.

Veloces offers Industry programs with renowned universities which include Curriculum Design and Enhancement, Industry Academia Collaboration, Technology and Innovation Centers of Excellence, Industry relevant Credentials and Certifications, Student Development Programs, Course and Content Development, etc.

ENGAGEMENT AT VELOCES WITH MICROSOFT

The Microsoft AI Tour 2025, held on Tuesday, 7th January 2025, in Bengaluru, brought together students, professionals, and corporate leaders from across India to explore the latest advancements in Artificial Intelligence. Among the distinguished attendees were three B.Tech Computer Science and Engineering students from the Veloces Center for Research & Technology, Ajeenkya DY Patil University, Pune, who were recognized as part of the prestigious cohort of 60 AI Super-achievers selected from across the country. Additionally, 12 B.Tech Computer Science and Engineering students from the university received VIP entry, offering them an exclusive opportunity to engage with industry experts, experience cutting-edge AI innovations, and network with leading AI professionals. The event served as a dynamic platform for knowledge exchange, fostering collaboration and inspiration among India's next-generation AI pioneers.



Ms. ENGINEER ADYPU - 2024

It is a proud moment for all of us as our Student Ms RASHI RANDIVE won the "Ms. Engineer" prize at the Engineer's Diwas Celebration organised at ADYPU Campus on 18-19th September 2024.

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YOUR SUCCESS JOURNEY BEGINS AT

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B.Tech Computer Science and Engineering programs

Program Highlight

- B.Tech CSE programs at ADYPU in collaboration with MICROSOFT offers Specialisation in Cyber Forensic and Information Security & Virtual and Augmented Reality.
- Global Certifications on AI, IT Specialist, System Admin, Developer and Cybersecurity from Microsoft, Rocheston, Unity, Cisco, Red Hat and Certiport.
- Access to Microsoft Cloud Labs for AI students
- Industry-level Training modules in Artificial Intelligence, Machine Learning, Data Science, Internet of Things, Cyber Security and Immersive Technologies (XR).
- Entrepreneurship Start-up support from Microsoft.
- Participation in Global Challenges and Competitions from Microsoft - Code without Challenges, AI Odyssey, Imagine Cup and Hackathons.

Our Alliances

Gold Microsoft Partner
Microsoft

Red Hat
ADVANCED BUSINESS PARTNER

CERTIPORT

ROCHESTON

aws PARTNER

Google Cloud

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BE THE TECHNOCRAFT OF TOMORROW!

Advantage of learning at **ADYPU**

PRACTICAL BASED LEARNING PATH

T-SHAPED PROFESSIONALS

TOP INDUSTRY PLACEMENTS

INDUSTRY ALIGNED CURRICULUM

STUDENT EXPERIENCE

GLOBAL IMMERSION

INNOVATION FACTORY

CORE FEATURES OF ADYPU SCHOOL OF ENGINEERING

- Innoventive Engineering
- Distinguished Faculty
- Hi-Tech Labs
- Industry Collaboration
- Start-Up Culture
- Global Immersion

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ADYPU CAMPUS LIFE

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B.Tech

COMPUTER SCIENCE AND ENGINEERING

VIRTUAL & AUGMENTED REALITY

ARTIFICIAL INTELLIGENCE

IMMERSIVE TECHNOLOGIES

MACHINE LEARNING

DATA SCIENCE

CYBER SECURITY

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WHY CHOOSE VIRTUAL & AUGMENTED REALITY AS A CAREER?

XR - Extended Reality is an umbrella term which includes but not limited to, Augmented Reality (AR), Virtual Reality (VR) & Mixed Reality (MR).

AR-VR INDUSTRY

- By 2028, there will be around **742.3 million AR-VR consumers** in various industries.

2028

2025 **742.3 million**

- With **1400% upsurge** in demand for AR-VR professionals, huge requirement for skilled talent by Top Tech companies and Startups.

1400% **upsurge** in demand

- By 2030, about **23.36 million jobs** will be enhanced by Immersive Technologies (AR-VR) globally.

23.36 million jobs

- XR - Extended Reality (AR, VR & MR) is expected to contribute US$ 240 billion to India's economy by 2030, accounting for **5% of its GDP.**

5% of INDIA'S GDP US$ 240 billion

Source: Statistica 2023 & Economic Times

WHY CHOOSE B.Tech CSE VIRTUAL & AUGMENTED REALITY @ADYPU?

- India's 1st Industry endorsed B.Tech program in AR & VR in Collaboration with Microsoft.
- Global Certifications from Microsoft, Certiport and Unity Technologies
- Workshops, Masterclass, Seminars by Visiting Experts from the Industry
- International Study Tour*
- Hi-Tech Classroom & Lab facilities
- Research & Industry internships in Top Technology & AR-VR Companies
- Capstone, Entrepreneurship & Start-up projects mentored by Industry experts

Note: Total Cost of Travel & Accommodation to be borne by the Student

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B.Tech COMPUTER SCIENCE AND ENGINEERING

VIRTUAL & AUGMENTED REALITY

In Collaboration with Microsoft

COURSE OVERVIEW

Augmented and Virtual Reality (AR-VR) is one of the most sought-after emerging technologies, recognized by the All India Council for Technical Education (AICTE). Leading global tech companies are continuously innovating in this space, creating a high demand for skilled AR-VR engineers.
The 4-year B.Tech in Computer Science & Engineering (Virtual & Augmented Reality) at ADYPU is designed for students eager to master AR-VR development technologies and build a successful career in this dynamic and rapidly growing industry. Join us and be a part of the future of Immersive Technology!

COURSE CURRICULUM & STRUCTURE

SEMESTER 1

- Engineering Mathematics - I
- Applied Physics
- Basic Electronics and Electrical Engineering
- Programming using Python
- Communication Skills
- Digital IT Workshop
- Co-curricular activities - I

SEMESTER 2

- Engineering Mathematics - II
- Fundamentals of AI
- Basics of Engineering Drawing
- Data Structure and Algorithm
- Technical English
- Indian Knowledge System
- Co-curricular activities - II

SEMESTER 3

- Operating Systems for AR & VR
- Fundamentals of VR & AR Technology
- Statistical Data Science using R
- Database Management System
- Business Presentation Skills
- Cyber Laws
- Social Internship

SEMESTER 4

- AR App Development with Unity Engine
- AR Mobile Game Development with Unity Engine
- Introduction to 3D Photogrammetry
- Digital Fabrication (3D Printing)
- Project Management
- Unity Certified Programmer
- Mini Project (Project-based learning)

SEMESTER 5

- Virtual Reality Interface, Application & Design
- Unreal Engine Fundamentals
- Introduction to Blueprints
- UX Design for Immersive Experiences
- Microsoft Azure AI Engineer Associate
- Introduction to Computer Vision
- Research Internship~

Research Internship should be done at the end of Semester 4 during the summer break.

SEMESTER 6

- Digital Signal Processing
- Motion Capture and MetaHumans in Unreal Engine
- VR App Development with C++ Programming
- Advanced Programming (Python)
- Virtual Reality and Artificial Intelligence
- Workshop on Project idea, Concept & Pitch

** **2-week International Study Tour (Conferences, Workshops & Masterclasses with International Expert/s) or Project Pitch workshop by Industry expert/s

SEMESTER 7

- Introduction to Extended Reality (XR)
- XR Development with Unreal Engine
- Quantitative Aptitude
- Industry Internship

SEMESTER 8

- Final Project (Choose any one)
- Capstone Project, or
- Entrepreneurship Project, or
- Research Project

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COMPUTER SCIENCE AND ENGINEERING

CYBER FORENSICS & INFORMATION SECURITY

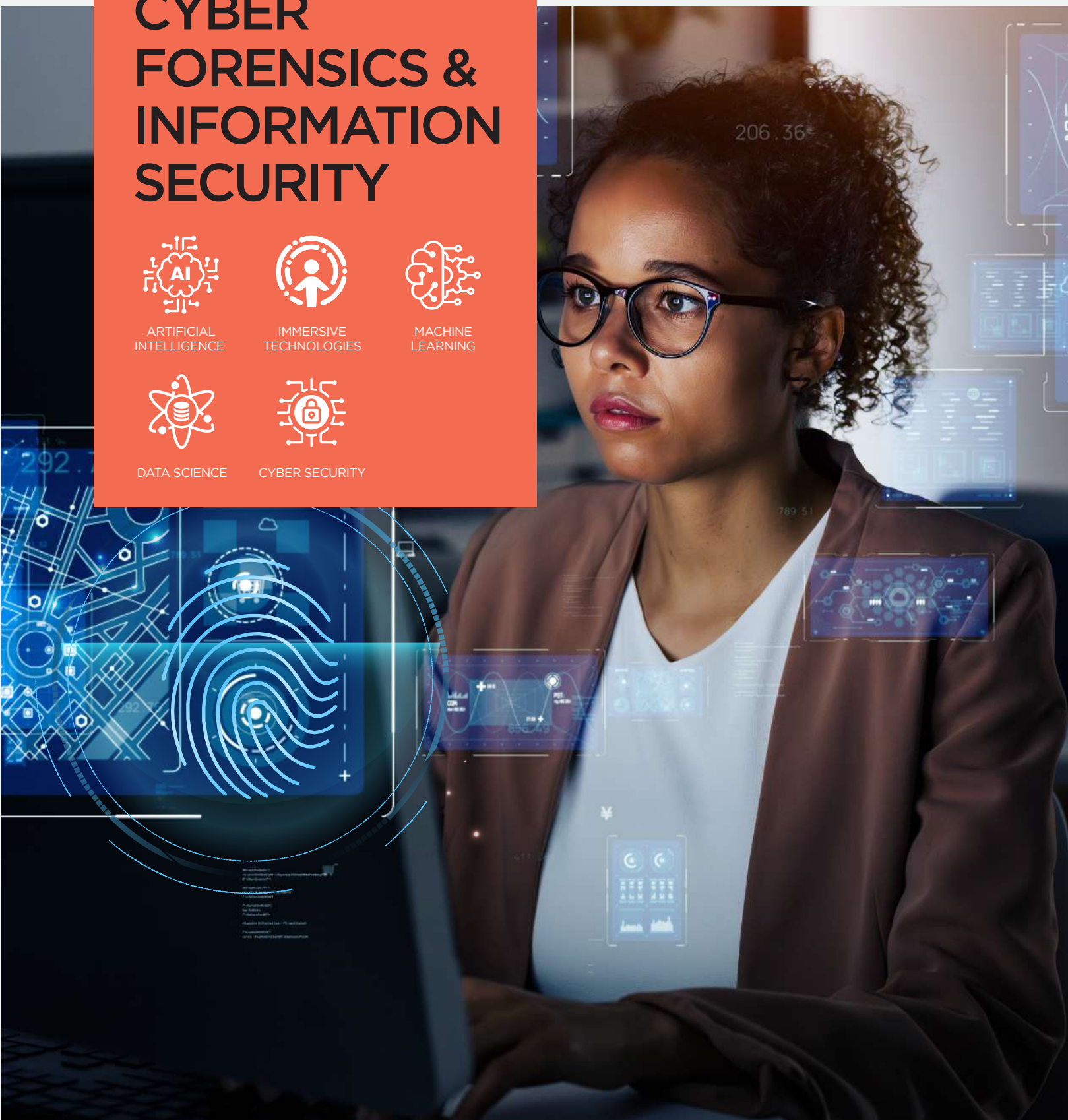
ARTIFICIAL INTELLIGENCE

IMMERSIVE TECHNOLOGIES

MACHINE LEARNING

DATA SCIENCE

CYBER SECURITY



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WHY CHOOSE CYBER SECURITY AS A CAREER?

- Global financial damages from cybercrime are estimated to reach 10.5 trillion by 2025. Cybersecurity skilled talent in demand and will rise to 3.5 million by 2025.

10.5 trillion	3.5 Million
Cyber Crime 2025	Talent in-demand 2025

- There are currently 714,548 job openings in the US that require cybersecurity skills with an increase of 28% by 2026.

714,548 job in the US

- Revenue in the Cybersecurity market is projected to reach US$ 2.90 billion in 2024.

US$ 2.90 billion in 2024.

- Cyber Solutions dominates the market with a projected market volume of US$ 1.51 billion in 2024.

Projected market volume of US$ 1.51 billion in 2024

- *Source: CompTIA's & Cert-in

WHY CHOOSE B.Tech CSE CYBER FORENSICS AND INFORMATION SECURITY @ADYPU

- India's 1st Industry endorsed B.Tech program in CYBER FORENSICS AND INFORMATION SECURITY in collaboration with Microsoft.
- Global Certifications from Microsoft, Red Hat, Certiport, Cisco and Rocheston.
- Workshops, Masterclass, Seminars by Visiting experts from the Industry
- Hi-Tech Classroom & Lab facilities
- Research & Industry internships in Top Technology Companies
- Capstone, Entrepreneurship & Start-up projects mentored by Industry experts

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B.Tech COMPUTER SCIENCE AND ENGINEERING
CYBER FORENSICS & INFORMATION SECURITY

COURSE OVERVIEW

Cybersecurity, Artificial Intelligence, and the Internet of Things (IoT) are among the most transformative emerging technologies, recognized by the All India Council for Technical Education (AICTE). With global tech giants continuously innovating in these fields, there is a growing demand for skilled professionals in Cybersecurity, AI, and IoT.

The 4-year B.Tech in Computer Science & Engineering (Cyber Forensics & Information Security) at ADYPU is designed for students passionate about cybersecurity, digital forensics, and information protection. This program equips learners with cutting-edge skills to combat cyber threats and build a rewarding career in this high-demand industry. Secure your future in cybersecurity—enroll today!

COURSE CURRICULUM & STRUCTURE

SEMESTER 1

- Engineering Mathematics - I
- Applied Physics
- Basic Electronics and Electrical Engineering
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- Communication Skills
- Digital IT Workshop
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SEMESTER 2

- Engineering Mathematics - II
- Fundamentals of AI
- Basics of Engineering Drawing
- Data Structure and Algorithm
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SEMESTER 3

- Operating Systems - I
- Network Security
- Statistical Data Science using R
- Database Management System
- Business Presentation Skills
- Cyber Laws
- Social Internship

SEMESTER 4

- Operating systems - II
- Network Security - II
- Internet of Things
- Advanced Blockchain Concepts
- Project Management
- Entrepreneurship
- 3D Digital Printing

SEMESTER 5

- Intelligent Document Processing using Azure AI
- Computer Vision using Azure AI
- Cyber Attacks
- Incident Handling
- IoT Developer
- Project Internship

SEMESTER 6

- NLP using AI
- Cloud Security Engineer
- Business Process Automation
- Disaster Management
- Digital Marketing
- Application Security
- Business Economics

SEMESTER 7

- Cyber Security Architect
- Applications of Generative AI
- Database
- Computational Thinking
- Technical English/ Effective Technical Communication
- Green Computing
- Industry Internship

SEMESTER 8

Final Project (Choose any one)
- Capstone Project, or
- Entrepreneurship Project, or
- Research Project

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CAREER PATHS & OPPORTUNITIES IN CYBER SECURITY AND AR-VR INDUSTRY

OPPORTUNITIES IN CYBER SECURITY

- Information Security Engineer
- Security Operations Center (SOC) Analyst
- Cyber Security Analyst
- Network Security Architect
- Security Software Developer
- Penetration Tester
- Application Security Engineer
- Malware Analyst
- Computer Forensics Analyst
- Digital Forensics Examiner
- Cybersecurity Engineer
- Vulnerability Assessor
- Software Engineer
- Robotics Engineer
- Full Stack Developer
- AI Data Analyst
- AI Data Scientist
- Big Data Engineer
- IoT Solution Tester
- Data Scientists
- Big Data Engineers
- Machine Learning Engineers

OPPORTUNITIES IN VR & AR INDUSTRY

- AR/VR Developer
- AR/VR Designer
- AR/VR Technical Architect
- AR/VR Software Engineer
- AR/VR Gameplay Engineer
- XR Systems R&D Specialist
- XR Systems Technology Engineer
- XR Developer
- XR Designer
- XR Technology Specialist

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POTENTIAL RECRUITERS

AMD
AREA
antilatency
arm
COLLABORA
Google
hp
HUAWEI
Imagination
intel
LUNARG
magic leap
MEDIATEK
Microsoft
mozilla
oculus
Pico
pluto
Qualcomm
RAZER
tobii
unity
VALVE
varjo
VeriSilicon
DisplayLink XR
EPIC GAMES
LG
logitech
NOKIA
SAMSUNG
Sony Interactive Entertainment
兆芯
zSpace
NVIDIA
accenture
Capgemini
CISCO
cognizant
Deloitte.
DXC TECHNOLOGY
EY
HCL
IBM
McAfee
NTT DATA
Optum
pwc
tcs TATA CONSULTANCY SERVICES
Tech Mahindra
WELLS FARGO
wipro

Join Veloces Center for Research & Technology's prestigious B.Tech program in Computer Science & Engineering to gain cutting-edge knowledge, hands-on experience, and industry-relevant skills. Build a strong foundation for a successful career and become a future leader in technology and innovation.

Shape the future - start your journey with us today!

CAMPUS ADDRESS

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