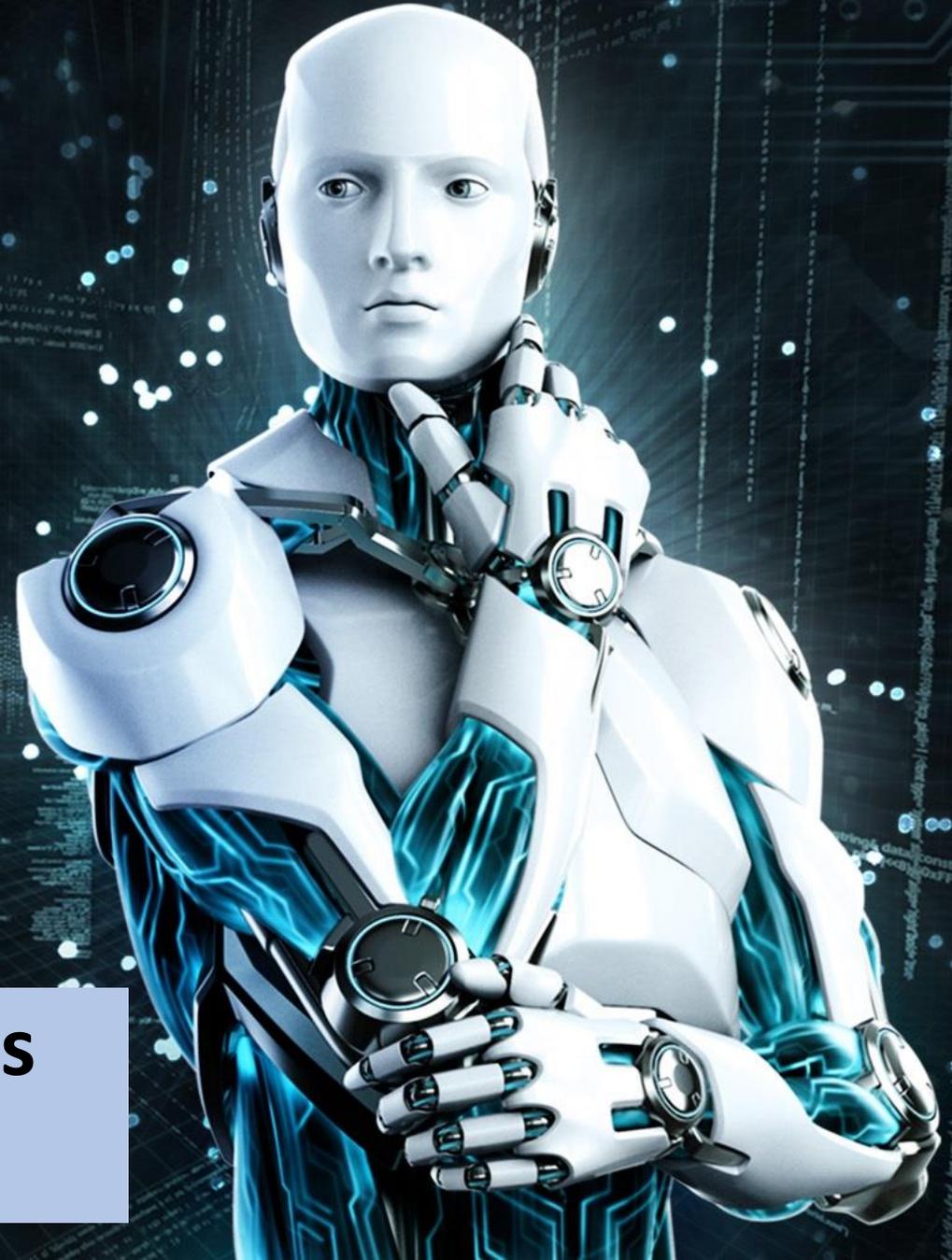


# B.Tech Computer Science & Engineering (Artificial Intelligence & Machine Learning)

**Vision Group of Institutions**

**B.Tech Diploma MBA BBA BCA**



# **Vision Group of Institutions**

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## **B.Tech Diploma MBA BBA BCA**

**Kanpur Campus: Hathipur, Mahrajpur, Off NH2, Kanpur- 209402**



# Program Overview

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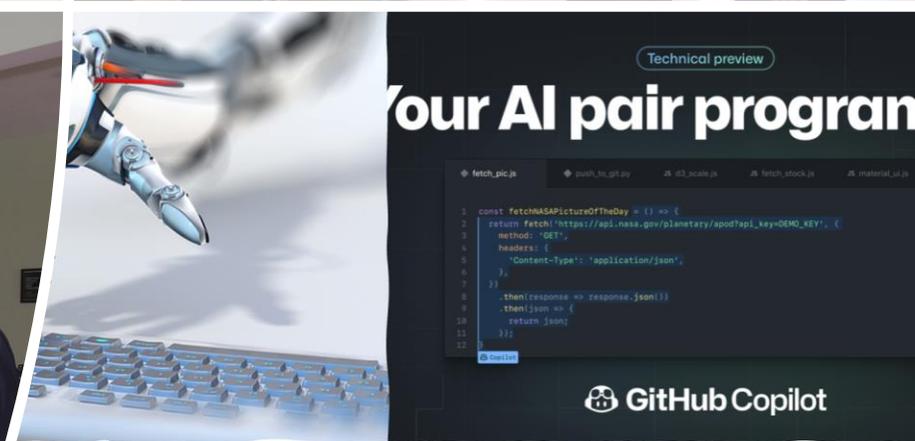
B.Tech program in Artificial Intelligence and Machine Learning offered by Vision Institute of Technology is an innovative course that blends computer science and engineering with AI and machine learning. Approved by AICTE, the program provides students with comprehensive training and hands-on experience in AI technologies.

Graduates receive a specialized B.Tech degree in Computer Science and Engineering in AI and Machine Learning, recognized globally by top employers and academic institutions.

# Program Highlights

The B.Tech program in Artificial Intelligence and Machine Learning at Vision Institute of Technology is an innovative and interdisciplinary program that prepares students to excel in the field of AI and ML. Graduates gain a competitive edge and are in high demand across industries. The program combines computer science, mathematics, and statistics, providing a deep understanding of both theory and practical applications. Students have access to cutting-edge technologies and industry-standard software, gaining hands-on experience. The program is accredited by prestigious organizations, ensuring graduates meet the highest academic and professional standards.

Stay at the forefront of AI and ML with Vision Institute of Technology.



## Building AI: Building Cognitive Abilities

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# What is Artificial Intelligence & Machine Learning?

Artificial Intelligence (AI) is a computer science field that creates machines capable of performing tasks that normally require human intelligence. AI systems use algorithms, statistical models, and machine learning techniques to learn from data and improve their performance over time. AI has various applications and has the potential to transform the way we live and work.

Machine learning is a subset of artificial intelligence that focuses on developing algorithms and models that enable computers to learn from data and make predictions or take actions without being explicitly programmed. It involves training and improving systems through data analysis, allowing them to adapt and improve their performance over time.

Check [Exploring Artificial Intelligence & Machine Learning, Special Resource Material @ VIT](#)



# What is B.Tech AI&ML about?

The B.Tech program in Artificial Intelligence and Machine Learning at Vision Institute of Technology offers a comprehensive four-year undergraduate education in the field. It equips students with the necessary skills and knowledge to become proficient in AI and Machine Learning. The program focuses on both practical and theoretical aspects, covering areas such as data analysis, algorithm development, and real-world implementation. Students gain hands-on experience with programming languages and technologies like Python, R, TensorFlow, and PyTorch.

Graduates are prepared for diverse career opportunities in sectors like healthcare, finance, manufacturing, and technology, where AI and Machine Learning are transforming industries. Join the program to become an expert in this exciting field.





# Why study B.Tech AI&ML at VIT?

Studying B.Tech AI&ML under CSE at Vision Institute of Technology offers a forward-thinking education that incorporates the latest technologies. Students explore AI, cloud computing, AR & VR, blockchain, and Data Science, preparing them for the digital landscape. The program also offers certification courses in [Azure](#), [Power Platform](#), and [State of App](#), providing industry-recognized credentials.

Vision Group of Institutions focuses on holistic [student development activities](#) through industry exposure, outdoor activities, certifications, sports, and community events.

With a comprehensive curriculum, experienced faculty, industry connections, practical experience, and state-of-the-art facilities, B.Tech students at VIT gain a competitive advantage in the dynamic IT industry.

# Further details about B.Tech CSE Program

- Eligibility

Eligibility is as per the AICTE & the university guidelines.

- Curriculum

The B.Tech program in Artificial Intelligence and Machine Learning at Vision Institute of Technology follows a comprehensive curriculum affiliated with Dr. A.P.J. Abdul Kalam Technical University, Lucknow. The program meets industry standards and covers core courses like Data Structures, Algorithms, and Artificial Intelligence. Students can choose elective courses in areas like Natural Language Processing and Robotics to specialize and gain expertise. The program provides a well-rounded education in computer science, mathematics, and statistics, preparing students for diverse careers in the tech industry and further academic pursuits.



# Job Prospects

The World Economic Forum's *Future of Jobs Report 2023* says that AI and machine learning specialists, data analysts and scientists, and digital transformation specialists are the most prominent emerging roles.

AI could contribute up to \$15.7 trillion<sup>1</sup> to the global economy in 2030, more than the current output of China and India combined. PwC's Global Artificial Intelligence Study.

The B.Tech program in AI and Machine Learning from Vision Institute of Technology opens up a wide range of career opportunities in industries such as healthcare, finance, e-commerce, and technology. Graduates can pursue roles like Data Scientist, Machine Learning Engineer, and AI Developer. The program equips students with the necessary skills and knowledge to excel in this growing field and make a significant impact in the tech industry.



# Research Opportunities

The B.Tech program in AI and Machine Learning at Vision Institute of Technology offers students extensive research opportunities in various areas of the field. Through coursework and independent projects, students can engage in cutting-edge research with the guidance of faculty members. Research areas include Natural Language Processing, Computer Vision, Robotics, and more.

This hands-on experience enhances students' skills and makes them desirable to employers. It also fosters critical thinking and problem-solving abilities. Research experience provides an advantage in the competitive job market and lays a strong foundation for further academic pursuits.



## Certification Programs

Vision Group of Institutions conducts a variety of certification programs, including the highly sought-after Microsoft Azure Certification Series (ACS), State of App; which covered techs like API, Serverless, Containers; and Power Platforms: Low Code App Development.

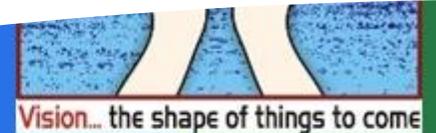
These programs provide our students with valuable exposure and practical skills in cutting-edge technologies, equipping them for success in the dynamic professional landscape.

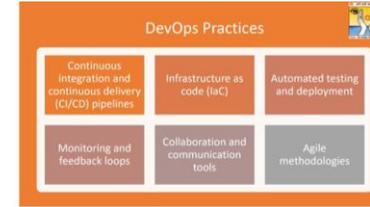
Few programs conducted in the Academic session 2022-23 were:

- [Microsoft Azure Certification Series \(ACS\)](#)
- [State of App- from Monolithic to Microservices](#)
- [Power Platforms: Low Code App Development](#)

# Azure Certification Program

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DevOps  
Building the future @  
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Vision Group of Institutions presents

### Adding AI: Building Cognitive Abilities

**Pair AI pair programmer**

GitHub Copilot

'State of Apps'- from Monolithic to Microservices



Few glimpses from our Certification Programs

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## Azure Certification Program (ACP) – Program details

- Day 1: Azure Fundamentals - Building a Strong Foundation in Cloud Computing
- Day 2: Azure Storage and Success Stories - Navigating the Cloud Landscape
- Day 3: Azure Data Services - Unlocking the Power of Your Data in the Cloud



## Cloud Storage Services Navigating the Cloud Landscape

Cloud Success Stories

Introduction to Azure Storage

Hands-on lab session- Azure Storage Lab



## Day 3: Azure Data Services Unlocking the Power of Your Data in the Cloud

- Introduction to Azure Data Services
- Azure SQL- First Look:
- Hands-on lab session- Azure Storage Lab



Day 1: Azure Fundamentals - Building a Strong Foundation in Cloud Computing

- Introduction to cloud computing
- Overview of Microsoft Azure
- Azure Services and Solutions
- Hands-on lab session- Azure Portal: First Look; Resources & Popular Services



## Azure Virtual Machines

Azure Virtual Machines is a fully customizable infrastructure-as-a-service (IaaS) solution that allows users to deploy and manage virtual machines in the cloud. It provides users with complete control over the virtual machines and the operating systems they run.



# Tech covered under Azure Certification Program

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# Serverless Event-driven Cloud Functions

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Containers- the  
future of App  
deployment



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Tech covered under  
'State of App'  
Certification Program

Application  
Programming  
Interface  
(API)



# Learning Outcomes

## Power Platform Developer Certification

Develop	Develop solutions using Power Apps, Power Automate, and Power Virtual Agents.
Understand	Understand the Power Platform user interface and navigation.
Create	Create Flows and build Power Apps.
Apply	Apply best practices for security, scalability, and performance.
Integrate	Integrate AI capabilities and Automate.
Merge	Merge data from different sources into Power BI.
Visualize	Visualize data using Power BI reports and dashboards.
Solve	Solve real-world business problems using the Power Platform.

Introduction to low-code Development, Power Platform suite, Your 1<sup>st</sup> flow using Power Automate

Microsoft Power Platform

The low code platform that spans Microsoft 365, Azure, Dynamics 365, and standalone apps.

Power BI Business analytics | Power Apps App development | Power Automate Process automation | Power Virtual Agents Intelligent virtual agents | Power Pages Landing page development

Day 1: Power Platform Developer Certification

Let's Make Some Connections

Power BI; data-driven future

OpenAI & Power Platform

Zero to Hero! Develop Apps

Vision Group of Institutions | Power Platform Developer Certification

### Hands on Labs

#### Power Platform Developer Certification

- The lab work in the Power Platform Developer Certification program reinforces concepts covered in each session.
- Participants will engage in hands-on activities throughout the program to gain practical experience using the Microsoft Power Platform.
- Participants will learn to create Flows using Power Automate, customize Canvas Apps, build Power BI reports and dashboards, and more.
- The lab work is designed to equip participants with the necessary skills to develop solutions using the Power Platform that can solve real-world business problems.

Low Code Developments, Reports and Dashboards

Power Platform Developer Certification

Power BI; data-driven future

OpenAI & Power Platform

Zero to Hero! Develop Apps

Vision Group of Institutions | Power Platform Developer Certification

### Low Code Developer Stories

Power BI- Data Sources, Visualization and Interaction  
Data modeling in Power BI

Day 3: Power Platform Developer Certification

Microsoft Power Platform

Power Automate Process automation | Power Virtual Agents Intelligent virtual agents | Power Apps Application development | Power BI Business analytics

Power Platform Developer Certification

Vision Group of Institutions  
B.Tech Diplome ITI MBA BBA BCA

# Technologies covered under Power Platform Certification

## Building the future @ Vision Group of Institutions

वृष्टि... आने वाले समय का आभास  
Vision... the shape of things to come

# Advantages @ VIT

 **Academics**

 **Certification Programs**

 **Center of Excellence (CoE)**

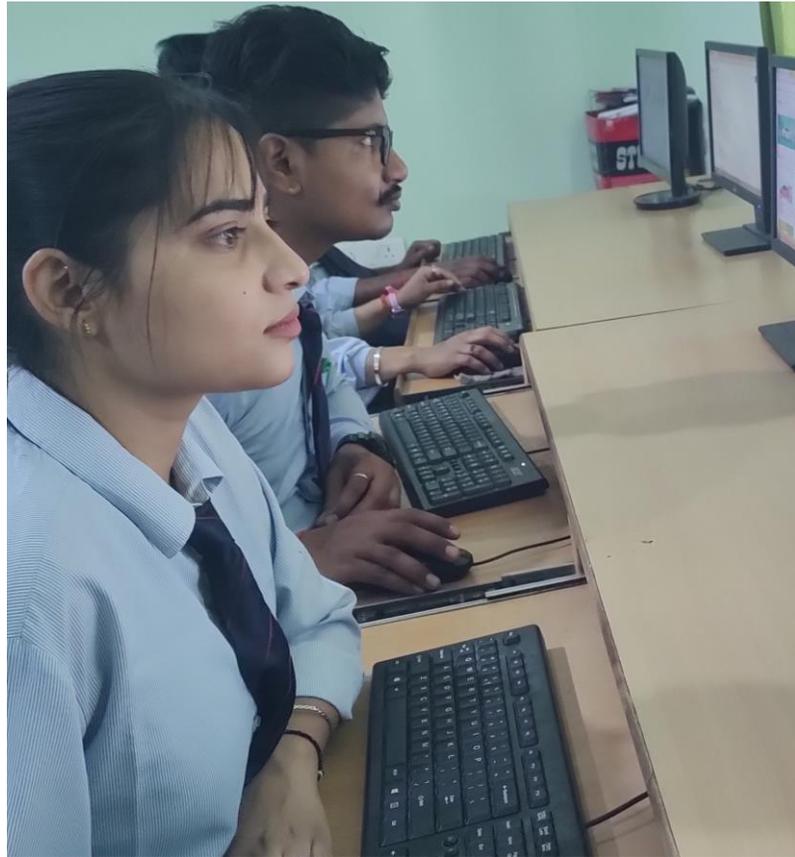
 **Student Development Activities**

 **Placement & Pre-Placement Activities**

# Advantages @ Vision Group of Institutions

Vision Group of Institutions offers number of unique advantages including academics, student development programs, placement & results, and facilities. From Advance Labs, Centre of Excellences, to numerous Student Activities; let college leave a lifelong cherished memory.

 <b>Industry Visits &amp; Surveys</b>	 <b>World Class Facilities</b>	 <b>Academic Records &amp; Merit Holders</b>	 <b>750+ Placements in Reputed Companies</b> <b>Training &amp; Placement Cell</b>	 <b>Hobby Clubs</b>	 <b>Projects &amp; Lab Work</b>
 <b>Hostel Life @ VIT</b>	 <b>Guest Lectures &amp; Workshops</b>	 <b>Innovation &amp; Research Centre</b>	 <b>ENTREPRENEURSHIP</b> <b>Entrepreneurship &amp; Start-up Cell</b>	 <b>Alumni Success Stories</b>	 <b>Academics</b>
					 <b>Centre for Character and Leadership Development (CCLD)</b>



Life @ Vision

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# Engineering Programs at VIT

Vision Institute of Technology offers B.Tech. Degree Programs in following Core Branches:

- Agriculture Engineering
- Civil Engineering
- Electrical & Electronics Engineering &
- Mechanical Engineering

VIT offers B.Tech Program in the following Emerging Areas, which fall under Computer Science & Engineering:

- B.Tech Computer Science & Engineering
- B.Tech (Artificial Intelligence & Machine Learning)
- B.Tech (Data Science)

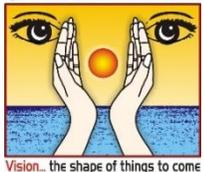
## B.Tech Programs at VIT

### B.Tech in CS & Emerging Tech

- B.Tech Computer Science & Engineering
- B.Tech (Artificial Intelligence & Machine Learning)
- B.Tech (Data Science)

### B.Tech in other Core Branches

- Agriculture Engineering,
- Civil Engineering,
- Electrical & Electronics Engineering, &
- Mechanical Engineering





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Vision... the shape of things to come.

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