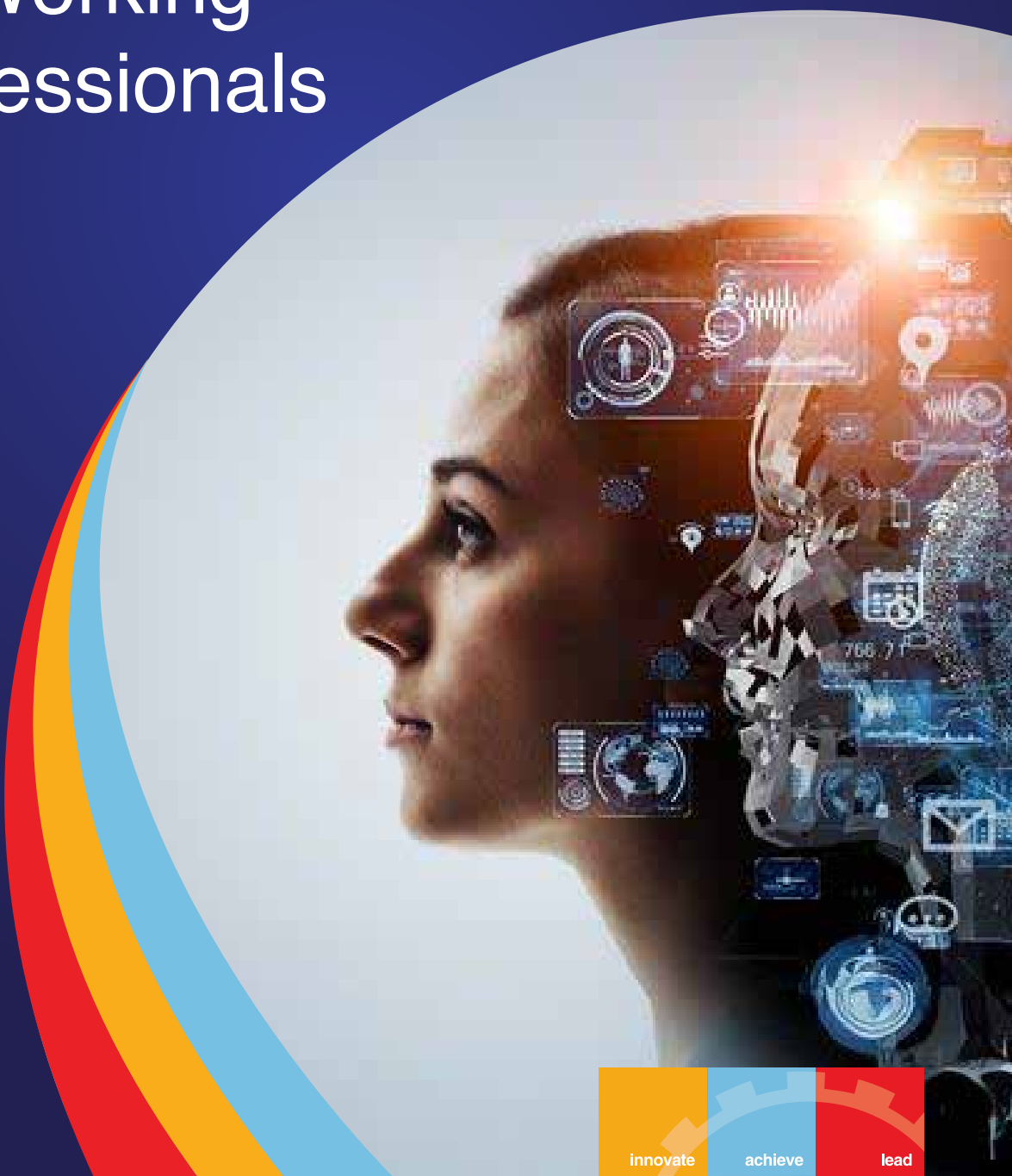
BITS Pilani
Pilani | Dubai | Goa | Hyderabad | Mumbai

WORK INTEGRATED
LEARNING PROGRAMMES

# B.Tech.
# Artificial Intelligence and Machine Learning
## for Working Professionals



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# Programme Introduction

Artificial Intelligence (AI) and Machine Learning (ML) are revolutionising industries across the globe, creating a strong demand for professionals skilled in these technologies. Working professionals, especially in fields such as IT, software development, and data analysis, are increasingly seeking opportunities to upskill and transition into AI and ML roles.

In view of this, we are offering a Bachelor of Technology (B.Tech.) in Artificial Intelligence and Machine Learning tailored specifically for working professionals. This programme is designed to provide flexibility in learning while ensuring a comprehensive understanding of AI and ML concepts and practices.



APPLY NOW

# Who Should Apply?

Highly driven and ambitious engineers who wish to gain deep insight into Core B.Tech. in Artificial Intelligence and Machine Learning.

Experienced professionals aspiring to gain an overall competency in the popular technology domains, which sets them apart from narrow specializations.



APPLY NOW

# Programme Highlights

B.Tech. in Artificial Intelligence and Machine Learning is a BITS Pilani Work Integrated Learning Programme (WILP). BITS Pilani Work Integrated Learning Programmes are UGC approved.

Blend of foundational sciences,core technologies and execution management.

This programme is of 7 semesters and can be pursued only by working professionals. You can pursue the programme without any career break.

The programme uses a Continuous Evaluation System to assess the learners.

The programme will also enable working professionals to attend contact classes from anywhere over a technology-enabled platform. The contact classes will be conducted mostly on weekends or after business hours.

Become a part of elite and global BITS Pilani Alumni community.

The programme positions the professionals out to gain an overall perspective to address the engineering field.


Fee submission option using easy - EMI with 0% interest and 0 down payment.



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# Programme Objectives

With the increased demand for skilled workforce in industries such as semiconductors, communication technologies, and AI-enabled embedded systems, the program aims to:

Apply mathematical and algorithmic reasoning to analyse computational problems.

Synthesise and apply computer science principles, encompassing microprocessors, computer architecture, database systems, and network infrastructures, across various abstraction levels.

Comprehend, analyse and demonstrate an understanding of artificial intelligence for real-world problems.

Analyse, transform, and interpret data to build efficient ML models and pipelines.

Understand the professional, legal, social and ethical issues of AI & ML techniques and appropriate usages.

Communicate complex AI & ML concepts to diverse audiences and continuously adapt to emerging trends and technologies in the field.

# WILP Presence and Impact

**45+**
Years of Educating Working Professionals

**1,24,000+**
Working Professionals Graduated

**46,000+**
Working Professionals Currently Enrolled

**1100+**
Faculty Members

**46+**
Programmes



APPLY NOW

# Student Learning Outcomes

At the end of the programme, the students will be able to:

- Demonstrate an understanding of fundamental mathematical and computational concepts to design algorithms to build efficient AI&ML Models.
- Demonstrate an understanding of various computer science concepts and principles to create AI-based solutions.
- Design, implement, and critically evaluate end-to-end machine learning pipelines and AI solutions for diverse real-world problems across various domains.
- Interpret, analyse and visualise data for efficient model building.
- Understand the legal and ethical aspects of the algorithms developed and their interpretations.

# Mode of Learning

The Mode of Learning used in this programme is called - Work Integrated Learning. Internationally, Work Integrated Learning (WIL) is defined as "An educational approach involving three parties - the student, educational institution, and employer organization(s) - consisting of authentic work-focused experiences as an intentional component of the curriculum. Students learn through active engagement in purposeful work tasks, which enable the integration of theory with meaningful practice that is relevant to the students' discipline of study and/or professional development*.

An education model can be considered as WIL if and only if:

1. The programs are designed and developed by the institute in collaboration with industry.
2. Work-focused experiences form an active part of the curriculum.
3. The program structure, pedagogy and assessment enable integration of theory-with relevant practice.

The innovative **Work Integrated Learning Programs (WILP)** of BITS Pilani are quite aligned with the above definition and requirements. The programs are designed in collaboration with its industry partners, subject matter experts from industry and academia that enable the students to remain relevant in their chosen profession, grow in their career and retain the habit of lifelong learning. The continued availability of workplace related experiences along with the weekly instruction sessions promote integration of theory with practice. An active participation of the organization mentor in the learning process of the student plays a key role. Case studies, simulation exercises, labs and projects further strengthen this integration.

The **WILP** of BITS Pilani is comparable to its campus-based programs in terms of structure, rigor, instruction, labs, assessment, faculty profile and learning support. The pervasive adoption of technology in all its academic processes makes the same high-quality education of BITS Pilani available to the aspirants at scale with the required flexibility.

# Key Benefits of BITS Pilani WILP

- Can pursue the programme without any career break and along with the job.
- The programme curriculum is highly relevant to sectors, industries and organisations they work for.
- In addition to the institute, the learning experience of working professionals in the programme is also supported by the employer organisation and Industry Mentors.
- Effective use of technology to deliver a range of learning interventions at the location of the working professional such as faculty contact sessions, asynchronous learning materials, remote, virtual and cloud labs, Learner support, peer to peer collaboration etc.
- Contact sessions with faculty take place mostly over weekends or after business hours and are conducted over a technology platform that can be accessed from anywhere.
- Mid semester and End semester examinations for every semester are conducted mostly at designated examination centres distributed across the country (for details refer to link mode of examinations).
- Learners can access engaging learning material which includes recorded lectures from BITS Pilani faculty members, course handouts and recorded lab content where applicable.

# Experiential Learning

The programme emphasises on Experiential Learning that allows learners to apply concepts learnt in the classroom in simulated, and real work situations.

This is achieved through: Simulation Tools, Platforms & Environments: Some or all of the following would be utilised across the programme.

Tensorflow for Deep Learning and various Python libraries for data processing, machine learning, OpenCV for computer vision, NLTK for NLP etc.

Tools & Technologies covered


### Continuous Assessment

The assessment includes graded assignments/quizzes, mid-semester and comprehensive exam

### Case studies & Assignments

Carefully chosen real-world cases & assignments are both discussed and used as problem-solving exercises during the programme

### Dissertation / Project Work

The seventh semester offers an opportunity for learners to apply their knowledge gained during the programme to a real-world like complex project. The learner is expected to demonstrate understanding of vital principles learnt across semesters and their ability to successfully apply these concepts

# Programme Structure

The programme features 24 Courses (totaling minimum of 84 units) towards course work, and Project (16 Units). All the courses will be offered using contact sessions over a technology enabled platform.

**Foundation Courses (5)**

| Course Title | Units |
|---|---|
| • Essential Mathematics for Machine Learning | 3 |
| • Discrete Mathematics and Graph Theory | 3 |
| • Introduction to Python Programming | 3 |
| • Digital Electronics and Microprocessors | 4 |
| • Probability and Statistics | 3 |

**Core Courses (14)**

| Course Title | Units |
|---|---|
| • Foundations of Data Structures and Algorithms | 4 |
| • Computer Organization and Architecture | 4 |
| • Database Systems and Applications | 4 |
| • Operating Systems | 4 |
| • Optimization Techniques for Machine Learning | 3 |
| • Data Management and Feature Engineering | 4 |
| • Attention Based Architectures | 4 |
| • Software Engineering | 4 |
| • Foundations of Artificial Intelligence | 4 |
| • Machine Learning Fundamentals | 4 |
| • Introduction to Deep Learning | 4 |
| • Ethics in AIML | 3 |
| • Introduction to Reinforcement Learning | 4 |
| • Introduction to Natural Language Processing | 3 |

### Discipline Electives (13)

| Course Title | Units |
|---|---|
| • Introduction to DevOps | 4 |
| • Application Development for ML | 4 |
| • Edge AI | 4 |
| • Computational Intelligence | 4 |
| • Computer Networks | 4 |
| • MLOps | 4 |
| • Introduction to Cloud Computing | 4 |
| • AI System Architecture | 4 |
| • Introduction to Information Retrieval | 3 |
| • Computer Vision | 4 |
| • Design of Conversational Experiences | 4 |
| • Big Data Systems | 5 |
| • Object Oriented Programming and Design | 4 |

### Project Work

| Course Title | Units |
|---|---|
| • Project Work | 16 |

# Programme Curriculum

### First Semester

- Essential Mathematics for Machine Learning
- Discrete Mathematics and Graph Theory
- Introduction to Python Programming
- Digital Electronics and Microprocessors

### Second Semester

- Database Systems and Applications
- Probability and Statistics
- Foundations of Data Structures & Algorithms
- Computer Organization and Architecture

### Third Semester

- Optimization Techniques for Machine Learning
- Operating Systems
- Foundations of Artificial Intelligence
- Data Management and Feature Engineering

### Fourth Semester

- Introduction to Deep Learning
- Ethics in AIML
- Software Engineering
- Machine Learning Fundamentals

### Fifth Semester

- Introduction to Reinforcement Learning
- Introduction to Natural Language Processing
- Elective I
- Elective II

### Sixth Semester

- Attention Based Architectures
- Elective IIII
- Elective IV
- Elective V

### Seventh Semester

- Project Work

*Note: Choice of Electives is made available to enrolled students at the beginning of each semester. Students' choice will be taken a s one of the factors while deciding on the Electives offered. However, Electives finally offered will be at the discretion of the Institute.*

# Course Descriptions

## Essential Mathematics for Machine Learning

Matrices, rank, determinants, solution of linear systems, vector spaces, basis and dimension, linear transformations, rank-nullity theorem, eigenvalues and eigenvectors, eigenvalue decomposition, LU, QR decomposition, SVD, numerical methods for solving linear systems and eigenvalues and eigenvectors. Lines, planes and hyperplanes, vector algebra, projection, Limits, continuity, differentiability, differentiation, Taylor series, unconstrained maxima and minima, and integration - in one and several variables.

## Discrete Mathematics and Graph Theory

Discrete Mathematics: Tautology and predicate calculus, relations & equivalence relations, Lattice and Boolean algebra, recurrence relations, Graph Theory: Introduction and properties, graph representations, graph traversal algorithms, graph connectivity, planar graphs, graph isomorphism, chromatic numbers & graph coloring, spanning trees, Euler & Hamiltonian graphs and Tree traversals.

## Introduction to Python Programming

A comprehensive introduction to Python programming covering the Python interpreter, Jupyter Notebook, basic syntax, data types, objects, operators, and essential programming concepts. Students learn to write functional Python programmes while mastering control statements, functions, and file handling through hands-on practice. Python Interpreter, Jupyter Notebook, Python Basics, Python scalar types, Objects its Attributes and Methods, Operators, Operator overloading, Control Statements and Iterations, Regular and Lambda functions, File handling. Immutable data structures - tuple, strings, Mutable data structures - List, Dictionary, Set, Accessing, Indexing and methods of data structures. Numpy Library - Arrays, data types, Arithmetic, Indexing, slicing and Numpy functions. Pandas Library - Series, data frame, Indexing, slicing, selection, filtering and operations. Plotting and Visualization using Matplotlib and Seaborn -Figures and Subplots, Colors, Markers, and Line Styles, Ticks, Labels, and Legends, Annotations and Drawing on a Subplot, Saving Plots to File, Line Plots, Bar Plots, Histograms and Density Plots, Scatter or Point Plots, Facet Grids and Categorical Data. Working with CSV, XML, JSON.

## Foundations of Data Structures and Algorithms

A comprehensive introduction to the fundamental concepts of data structures, algorithms, and computational complexity analysis including Big O notation and recursive problem-solving approaches. This course establishes the groundwork for algorithmic problem-solving while teaching students to analyze and optimize code performance

through complexity analysis and recursive thinking. Overview of data structures and algorithms, Computational complexity and Big O notation, Recursion; Linear data structures – stacks, arrays, queues; Singly and doubly linked lists; Binary trees and binary search trees, traversal algorithms, Pre-fix, in-fix and post-fix expressions; Min and max heaps, Priority queues; Hashing, Hash functions and collision resolution; Graph representations (adjacency matrix, adjacency list), Graph traversals (BFS, DFS); Sorting and Searching Algorithms - Quicksort, Mergesort, Heapsort; Algorithm design: Dynamic Programming, Greedy Algorithms, Divide and Conquer Algorithms.

## Data Management and Feature Engineering

Structured Data, Unstructured Data, Semi-structured Data, Quantitative and Qualitative Data, Primary and Secondary Data Sources, Internal and External Data Sources; Data Warehousing and OLAP, Data warehouse concepts and architectures, ETL processes, OLAP operations for feature engineering; Descriptive Statistics for Numerical and Categorical Data; Data Relationship using Correlation and Covariance Analysis; Data Quality Issues - missing data, imputation techniques, data duplication, transforming data, discretization and binning, encoding categorical data, outlier detection and removal. Data Reduction - Dimensionality and Numerosity Reduction, Feature Selection - Filter methods, Wrapper Methods, Forward Selection and Backward Elimination; Feature Extraction - Covariance Analysis, PCA, t-SNE; Text and image pre-processing, embedding techniques for text and images; Data Privacy, Security, and Governance, Data anonymization techniques, Access control and encryption for sensitive data, Compliance with data protection regulations (e.g., GDPR, CCPA).

## Foundations of Artificial Intelligence

Introduction to Artificial Intelligence, Types of AI: narrow vs. general AI, AI applications and ethical considerations; Intelligent Agents - Agent architectures, Environment types, Rationality and performance measures; Problem Solving and Search Strategies - Problem formulation, Uninformed search strategies (BFS, DFS), Informed search strategies (A*, Best-first search), Heuristics and their design; Constraint Satisfaction Problems - CSP formulation, Backtracking search for CSPs, Constraint propagation, Local search for CSPs; Adversarial Search and Game Playing - Minimax algorithm, Alpha-beta pruning; Knowledge Representation - Propositional logic, First-order logic, Forward and backward chaining; Automated Planning - STRIPS representation, Partial-order planning, GraphPlan algorithm, Hierarchical task network (HTN) planning; Reasoning under Uncertainty - Probability theory basics, Bayesian networks, Inference in Bayesian networks.

## Introduction to Cloud Computing

Introduction to Cloud Computing, Cloud Computing, services, deployment models, Origins and Motivation, Types of Clouds and Services, Virtualization Techniques and Types, Use & demerits of Virtualization, Types of Virtualization, SW virtualization Containers, Virtual Machine vs Container, Infrastructure as a Service, Platform as a Service and SaaS,

Managing Virtual Resources on the Cloud: Provisioning and Migration, Capacity management and Scheduling in cloud computing, Issues and Challenges : Availability, Multi-Tenancy, Security and SLA.

## Optimization Techniques for Machine Learning

Inner product spaces, Orthonormal bases, Spectral theorem, Linear optimization, simplex method, artificial variables, dual simplex algorithm and sensitivity. Vector calculus, gradient descent methods, Ada grad, RMS Prop and Adam methods, Non-linear optimization, KKT conditions, Weak and strong duality, PCA, SVM. Kalman filtering.

## Machine Learning Fundamentals

Introduction to Machine Learning, Types of machine learning: supervised, unsupervised, reinforcement, ML workflow and key challenges; Supervised Learning: Regression - Linear, Polynomial, Regularization techniques: Lasso, Ridge, Evaluation metrics for regression; Supervised Learning: Classification - Logistic regression, Decision trees, k-Nearest Neighbors (k-NN),Support Vector Machines (SVM), Evaluation metrics for classification; Ensemble Methods- Bagging and Random Forests, Boosting: AdaBoost, Gradient Boosting, Stacking; Unsupervised Learning: Clustering, K-means clustering, Hierarchical clustering, DBSCAN, Evaluation metrics for clustering.

## Introduction to Deep Learning

This comprehensive course provides a thorough exploration of deep learning architectures, progressing from fundamental neural networks through advanced models including CNNs, RNNs, transformers, and generative networks, with hands-on implementation experience using modern frameworks. Students will master both the theoretical foundations and practical applications of deep learning, covering everything from image classification and sequence modeling to attention mechanisms and generative AI; Introduction to Deep Learning and Neural Networks, Biological inspiration and history, Deep learning vs. traditional machine learning; Fundamentals of Feed Forward Neural Networks, Architecture, Training, Regularization techniques (dropout), Implementing for classification and regression tasks; Convolutional Neural Networks (CNN), CNN architecture and layers, Convolution, pooling, and fully connected layers, Image classification with CNNs, Transfer learning and fine-tuning, CNN visualization and interpretation; Recurrent Neural Networks (RNN), RNN architecture and concept, Backpropagation through time, Long Short-Term Memory (LSTM) networks, Gated Recurrent Units (GRU), Applications in sequence modeling; Generative Models, Autoencoders (vanilla and variational), Generative Adversarial Networks (GANs), Applications of generative models.

## AI System Architecture

This comprehensive course explores the fundamental principles and advanced techniques of parallel computing systems, focusing on data parallelism, model parallelism, and hybrid approaches for distributed computing architectures of AIML. Introduction to Parallel System;

Data Parallelism, Splitting Input Data, Parameter Server and All-Reduce, Building a Data Parallel Training and Serving Pipeline, Bottlenecks and Solutions; Model Parallelism, Splitting the Model, Pipeline Input and Layer Split, Implementing Model Parallel Training and Serving Workflows, Achieving Higher Throughput and Lower Latency; Advanced Parallelism Paradigms, A Hybrid of Data and Model Parallelism, Federated Learning and Edge Devices.

## Attention Based Architectures

Word Embeddings and Contextual Representations - Word2Vec and GloVe architectures, FastText, introduction to Contextual embeddings, Embedding visualization and analysis; Attention Mechanisms- Query, Key, Value concept, Multi-head attention, Self-attention mathematics, Implementation of attention layers; Transformer Architecture overview - language modeling, Next sentence prediction, BERT variants (RoBERTa, ALBERT, DistilBERT), prompt engineering, multilingual and multi-modal architecture; GPT Architecture (GPT-1 to GPT-4), Vision Transformer and Video Transformer, LLM and RAG.

## Application Development for ML

Overview of ML model usage in applications: predictive analytics, personalization, recommendations, etc.; Model Inference in Software Applications; Model as a Service (MaaS): Build, test and validate Model's APIs and backend; Serving models through APIs; Model serving using frameworks; Building Self-Contained ML Applications: Applying data processing, feature engineering, model training, and inference within a single environment; Packaging and deploying the application for local or single device usage; Cloud-based MaaS platforms: Build Applications using Managed and Existing AI/ML Services; Embedding ML Models in Applications: Strategies for embedding ML models in mobile, web, and desktop applications; Model formats suitable for different platforms; Serving models directly from the client vs. server-side inference.

## Edge AI

Introduction to Edge AI, Edge AI applications and use cases, Edge AI ecosystem, Hardware platforms overview; Edge Hardware and Architecture, Microcontrollers and embedded systems, Edge processors (ARM, RISC-V), AI accelerators, Edge TPU, Neural compute sticks, Power consumption considerations. Model compression overview, Quantization techniques, Pruning methods, Knowledge distillation. Neural architecture search, Lightweight model architectures, MobileNet family, EfficientNet family; Edge AI Frameworks and Tools, Edge AI development tools, Model conversion and optimization tools; Embedded Machine Learning, TinyML concepts, Model deployment on MCUs, Resource-constrained computing; Edge AI Security and Privacy; Performance Optimization - Latency, Memory, Power, Benchmarking and Performance metrics.

## Computational Intelligence

Evolutionary Algorithms - Genetic Algorithms; Swarm Intelligence - Particle Swarm Optimization (PSO), Ant Colony Optimization (ACO), Artificial Bee Colony (ABC); Fuzzy

Systems - Fuzzy set theory, Membership functions, Fuzzy operations, Linguistic variables, Fuzzy rules, Fuzzy inference systems. Decision Making with Fuzzy Information, Fuzzy Classification and Pattern Recognition.

## Ethics in AIML

This comprehensive course explores the ethical dimensions of artificial intelligence, covering philosophical foundations, fairness, transparency, and governance frameworks essential for developing responsible AI systems. Students will learn to identify and mitigate bias in AI systems, implement explainable AI techniques, and apply ethical principles to real-world AI development challenges while understanding the critical balance between AI capabilities and ethical considerations. Overview of key ethical issues, Importance of ethics in AI, Applying ethical frameworks to AI; AI Governance and Policy - Current AI regulations and policies, International perspectives on AI governance; Fairness and Bias - Understanding AI Bias, Types of bias in AI systems, Sources of bias: data, algorithms, human factors, Case studies of AI bias; Fairness in Machine Learning - Defining fairness in AI, Fairness metrics and their limitations, Techniques for mitigating bias; Transparencyand Explainability - The Black Box Problem, Importance of AI transparency, Challenges in understanding complex AI systems, Legal and ethical implications of opaque AI; Explainable AI (XAI) - Techniques for making AI systems more interpretable, Trade-offs between performance and explainability, Practical applications of XAI; AI and Data Privacy - Data collection and consent, Anonymization and re-identification risks, Privacy-preserving machine learning techniques; Ethical Data Handling - Data governance frameworks, Responsible data sharing and use, Ethical considerations in big data analytics; AI Safety - Defining AI safety, Short-term vs. long-term AI safety concerns, Approaches to building safe AI systems; Societal Impacts of AI - Economic impacts: job displacement and creation, Social impacts: inequality and social justice, Environmental considerations in AI development.

## Introduction to Reinforcement Learning

Introduction- Notion of Reinforcement Learning (RL), Use cases, Agent - Environment Interface and Elements of RL, RL vs. Supervised/ Unsupervised Learning, Classification of Solution Approaches; Multi-armed Bandits (MAB) Problem - statement, real scenarios modelled as MAB, learning values, exploration vs exploitation, handling non-stationarity, UCB action selection; Finite Markov Decision Problem (Finite MDP)- Modelling problems as MDP, Episodic vs. Continuing Tasks, Policy and Value Functions, Bellman Equations, Bellman Optimality Equations, Optimal solutions vs Approximate solutions; Dynamic Programming - Policy Improvement Theorem, Policy Iteration, Value Iteration, Asynchronous Dynamic Programming, Applications; Monte-carlo Methods - On-Policy Prediction, Estimation and Control, Off-policy prediction; Temporal Difference (TD) Learning - TD(0), Sarsa, Q-Learning, Maximization Bias & Double Learning, n-step TD Learning, Applications; On-policy Prediction and Control with Approximation - Value-function Approximation, Stochastic gradient and Semi-Gradient Method, Linear Approximation Methods, Constructing Features for Linear Methods(Polinomials, Coarse Coding, RBF), Semi-gradient n-step Sarsa; Policy Gradient Methods - Policy Gradient Theorem, REINFORCE, Introduction to Actor-Critic Methods; Case Studies ( For Ex: the lines of AlphaGo, AlphaGo Zero, Personalized Web Services, Human Level Video Game Playing).

## Introduction to Natural Language Processing

This comprehensive course provides an exploration of fundamental concepts and advanced techniques in Natural Language Processing (NLP). Covering a broad range of topics from traditional methods to modern approaches, students will develop a strong foundation in how machines understand and generate human language Topics: Natural Language Understanding and Generation, N-gram, Word to Vectors / Word Embedding (Skip gram/CBOW, Glove), Part of Speech Tagging, Parsing, Word Sense Disambiguation.

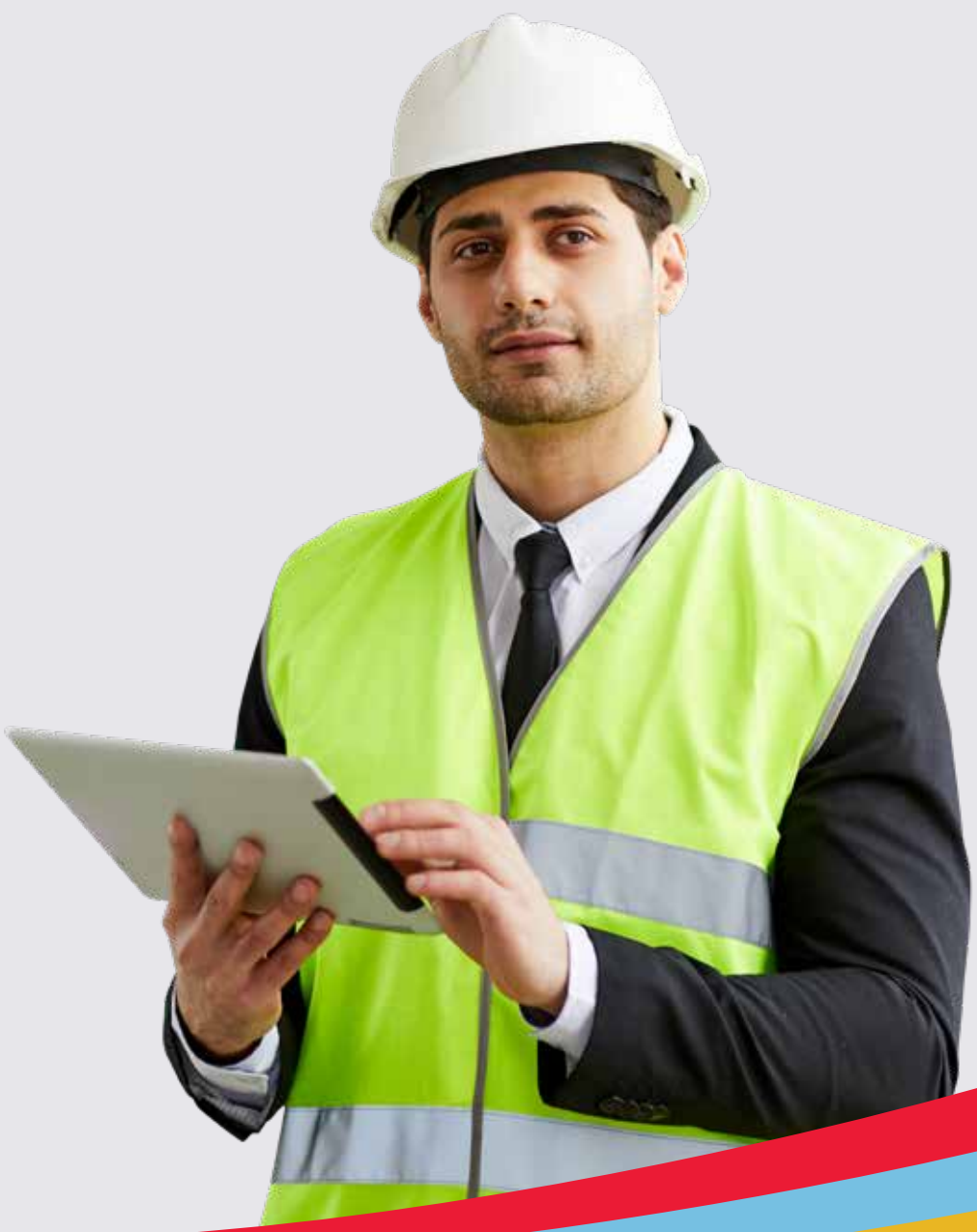
## Introduction to Information Retrieval

This comprehensive course explores the fundamental concepts and advanced techniques of information retrieval systems, covering traditional boolean and vector space models to neural approaches for text and multimedia search. Students will learn to design, implement, and evaluate modern search systems while gaining practical experience with both classical IR methods and contemporary neural information retrieval technologies used in today's search engines. Introduction to Information Retrieval, Basic Search Model, Boolean Retrieval, Evaluation in Information Retrieval, Multimedia Information Retrieval, Multimedia Search Technologies, Neural IR; Text Classification, Vector Space Model, Vector Space Classification, Text Clustering.

# Eligibility Criteria

The programme is designed for:

- Working professionals holding Diploma or B.Sc. with at least 60% aggregate marks, and mathematics/ statistics as mandatory subjects at university level.



# Fee Structure

The following fees schedule is applicable for candidates seeking new admission during the academic year 2024-25.

| Application Fees (one time) | Admission Fees (one time) | Semester Fees (per semester) |
|---|---|---|
| ₹1500 | ₹16,500 | ₹66,750 |

## Easy Monthly Payment Option with 0% Interest and 0 Down Payment

**Instant EMI option with 0% interest and 0 Down Payment is now available that allows you to pay programme fee in an easy and convenient way.**

- Instant online approval in seconds
- No Credit Cards/ CIBIL score required
- Easy & Secure online process using Aadhaar and PAN number
- Anyone with a Salary Account with Netbanking can apply Option to submit fee using easy- EMI with 0% interest and 0 down payment

**Last Date to Apply: 23rd December 2024**

**Click here** to learn more

All the above fees are non-refundable.

**Important:** For every course in the programme, institute will recommend textbooks, students would need to procure these textbooks on their own.

# Mode of Examination

Mode of Examinations applicable for students admitted in

**Batch starting in January 2025.**

Semester 1, 2, 3, 4, 5 & 6 have Mid-semester Examinations and Comprehensive Examinations for each of course.

**These examinations are mostly scheduled on Friday, Saturday or Sunday.**

Students need to **appear in person for taking the examinations at the institution's designated examination centres.**

As per the examination schedule, Instructions, rules and guidelines announced before every examination.

Students can take their examination at any of our **25 designated** examination centres in India at the following locations:

- **South Zone:** Bangalore, Chennai, Hyderabad, Mysore, Vijayawada, Visakhapatnam, Kochi, Thiruvananthapuram and Coimbatore.
- **North Zone:** Delhi NCR, Jaipur, Chandigarh, Lucknow and Pilani.
- **West Zone:** Mumbai, Pune, Goa, Ahmedabad, Indore, Vadodara and Nagpur.
- **East Zone:** Kolkata, Guwahati, Jamshedpur and Bhubaneshwar.

In addition to these locations, the Institution also has a designated examination centre in **Dubai.**

During these semesters, in addition to the above mentioned Mid-Semester and Comprehensive examinations, there will also be Quizzes/Assignments conducted online on the Learning Management System (LMS) as per the course plan in which the students need to participate.

In Semester 7 (Final Semester), the student will be doing Dissertation/Project Work as per the Institution's guidelines.

**For International Students:**

- In addition to the above locations, the institution also has a designated international examination centre, located in **Dubai.**
- To facilitate the learning of international students, applying from any other location except India and Dubai, the mode of examinations will be online, which can be availed by meeting the requirements of the institute.

a). Scanned copy of the visa for the country in which you are currently residing. The visa should be currently valid. No expired visas shall be considered,

b). Scanned copy of government-issued ID from the residing country

c). HR recommendation or endorsement letter from the employer, stating the location of your work.

- Indian students, who are temporarily based out of India, can also avail of online examinations **on request** by meeting the above-mentioned requirements of the institute.

# How to Apply

**Click here** to **Apply now**

Create your login at the Application Center by entering your unique Email id and create a password of your choice.

Once logged in, follow four essential steps:

**Step 1**
Fill and submit your application form for your chosen program.

**Step 2**
Download a PDF copy of the application form.

**Step 3**
Pay the application fee of INR 1,500 using Net banking/Debit Card/Credit Card.

**Step 4**
Print the downloaded Application Form and note your Application Form Number.

In the printout of the downloaded Application Form, you will notice on page no. 3 a section called the Employer Consent Form. Complete the Employer Consent Form. This form needs to be signed and stamped by your organisation's HR or any other authorised signatory of the company.

Important: In view of work-from-home policies mandated by many organisations, a few candidates may not be able to get the physical forms signed by their HR/other authorised organisational representative. Such candidates may instead request an email approval to be sent to their official email ID by the HR using the format available **through this link.**

On page 4, complete the Mentor Consent Form, which needs to be signed by your Mentor.

Due to remote work policies, some candidates may struggle to get physical mentor signatures. They can request email approval using a **provided format**.



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## Who is a mentor:

- Candidates applying to Work Integrated Learning Programmes must choose a Mentor, who will monitor the academic progress of the candidate, and act as an advisor & coach for successful completion of the programme.
- Candidates should ideally choose the immediate supervisor or another senior person from the same organisation. In case a suitable mentor is not available in the same organisation, a candidate could approach a senior person in another organisation who has the required qualifications. Wherever the proposed Mentor is not from the same employing organization as that of the candidate, a supporting document giving justification for the same should be provided by the candidate's employer.
- Candidates applying to B.Tech. programmes should choose a Mentor who is an employed professional with B.E./ B.S./ B.Tech./ M.Sc./ A.M.I.E./ Integrated First Degree of BITS or equivalent. Candidates applying to M.Tech., M.Sc., MBA, M.Phil programme should choose a Mentor who is an employed professional with:
- B.E./ M.Sc./ M.B.A./ M.C.A./ M.B.B.S. etc. and with a minimum of five years of relevant work experience.

  OR
- M.E./ M.S./ M.Tech./ M.Phil./ M.D./ Higher Degree of BITS or equivalent.

Page 5 of the downloaded Application Form includes a Checklist of Enclosures/Attachments.

Photocopies of these documents should be made, and applicants need to self-attest academic mark sheets and certificates.

In the final step (Step 4), upload your printed Application Form, Mentor Consent Form, Employer Consent Form, and mandatory documents one by one.

Accepted file formats for uploads include .DOC, .DOCX, .PDF, .ZIP, and .JPEG.

The Admissions Cell will review your application for completeness, accuracy, and eligibility.

Selected candidates will receive email notifications within two weeks of submitting their application with all required documents.

You can also check your selection status by logging in to the Online Application Centre.

BITS Pilani

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WORK INTEGRATED
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