



**BITS Pilani**

Pilani | Dubai | Goa | Hyderabad | Mumbai

**WORK INTEGRATED  
LEARNING PROGRAMMES**

# **M.Tech.** **Artificial Intelligence and Machine Learning** for Working Professionals



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# Program Introduction

With a surge of job opportunities in the fields of Artificial intelligence and Machine Learning, the world is indeed standing on the threshold of massive transformation.

The market size in the Artificial Intelligence market is projected to reach **US\$ 243.70 bn in 2025.**

The market size is expected to show an annual growth rate **(CAGR 2025-2030) of 27.67%**, resulting in a market volume of **US\$ 826.70 bn by 2030.**

Prepare for a career with infinite possibilities in AI and ML with India's most comprehensive and world-class M.Tech. Artificial Intelligence and Machine Learning programme without taking any career break.

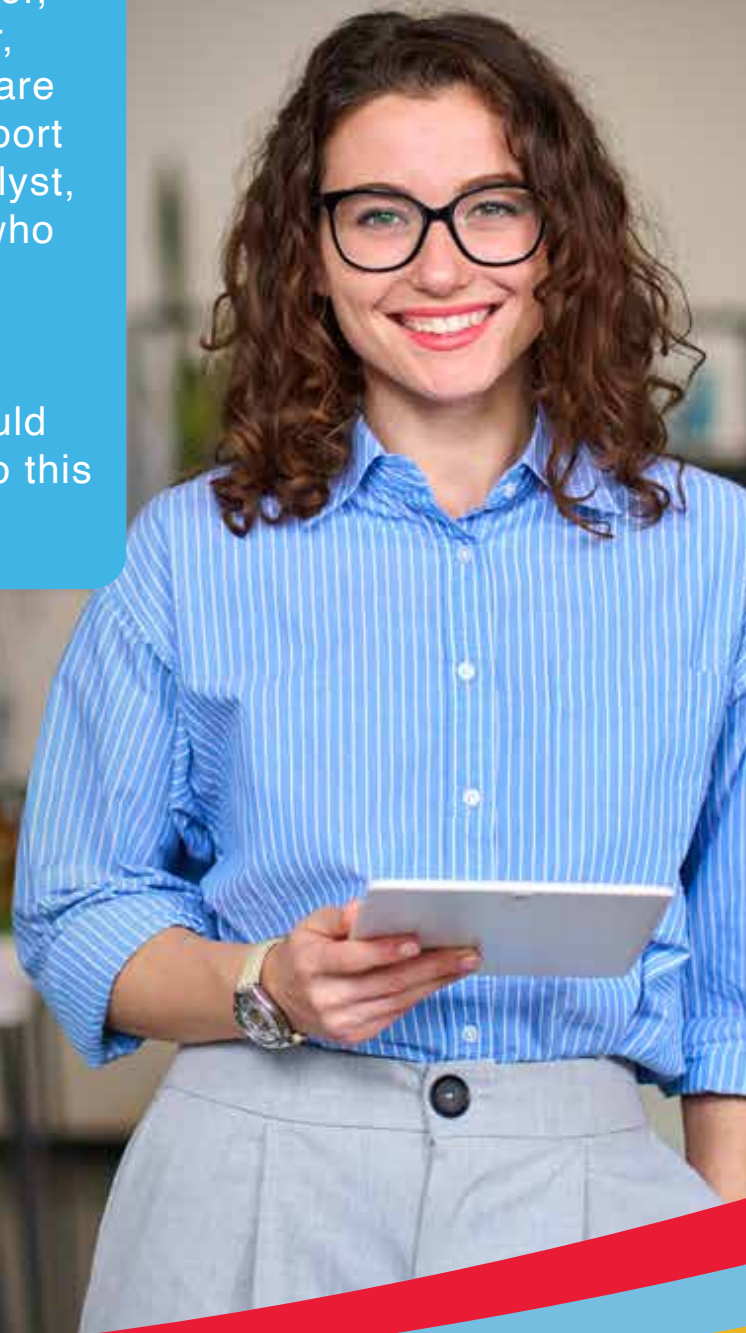
This four-semester program equips IT professionals and software developers with a diverse skill set, paving the way for career growth in high-demand roles like ML Engineers and AI Scientists.



# Who Should Apply?



IT and Software professionals working as Software Engineer, Software Developer, Programmer, Software Test Engineer, Support Engineer, Data Analyst, Business Analyst, who wish to transition to roles such as ML Engineers & AI Scientists, etc. should consider applying to this programme





# Programme Highlights



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



Meant for IT professionals and Software developers aiming to become expert Machine Learning Engineers & AI Scientists.



Pursue the four-semester programme without any career break. Contact classes over a technology enabled platform are conducted mostly on weekends and after business hours.



The programme offers a set of core courses and elective courses, allowing students to gain expertise in Advanced Deep learning, Natural Language Processing, etc.



Offers the most comprehensive AI & ML Curriculum for working professionals.



The programme makes use of Tools and Technologies such as Tensorflow for Deep Learning and various Python libraries for data processing, machine learning, OpenCV for computer vision, NLTK for NLP etc.



The programme has an unmatched range & depth and covers the widest variety of skill & knowledge areas required to develop advanced AI solutions.



The Dissertation (Project Work) in the final semester enables students to apply concepts and techniques learned during the programme.





The programme uses a Continuous Evaluation System that assesses the learners over convenient and regular intervals.



Opportunity to become a member of an elite & global community of BITS Pilani Alumni.



The education delivery methodology is a blend of classroom and experiential learning.



Option to submit fee using easy-EMI with 0% interest and 0 down payment.



Experiential learning consists of Virtual lab exercises, assignments, case studies and work-integrated activities.



# Programme Objectives



Abundance of user-generated data, easy access to computing and storage in the cloud, open-source libraries and algorithmic advancement have led to the deployment of artificial intelligence and machine learning techniques across industries.



This in turn has fuelled significant job opportunities in the IT products and services sector in India and across the globe.



This program is geared towards the professional development of employees who are working in the area of IT products and services industry or who aspire for a career in the applications of AI and ML techniques in traditional industries.



# WILP Presence and Impact



**45+**

Years of  
Educating Working  
Professionals



**1,26,169**

Working  
Professionals  
Graduated



**46,178**

Working Professionals  
Currently Enrolled



**1100+**

Faculty Members



**47**

Programmes





# Student

## Learning Outcomes

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



Demonstrate conceptual understanding and hands-on knowledge of traditional and contemporary AI and machine learning techniques, including deep learning, and reinforcement learning.



Demonstrate conceptual understanding and hands-on knowledge of AI application areas such as natural language processing, computer vision, or cyber security.



Understand the system and software engineering requirements for implementing machine learning systems on large datasets and in resource-constrained environments.



Understand the underlying ethical issues in applying AI and machine learning.



# 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, [click here](#).
- 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



## Supplementary Learning

In addition to contact classes over a technology enabled platform, supplementary sessions will be organised periodically comprising of tutorials, doubt-clearing interactions, and industry talks (18-20 hours per semester).





### Case studies & Assignments

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

### Project Work

The fourth 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



### Continuous Assessment

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



# Programme Curriculum

## First Year - First Semester

- Mathematical Foundations for Machine Learning.
- Introduction to Statistical Methods
- Artificial and Computational Intelligence
- Machine Learning

## First Year - Second Semester

- Deep Neural Networks
- Deep Reinforcement Learning
- Elective 1
- Elective 2

## Second Year - First Semester

- Elective 3
- Elective 4
- Elective 5
- Elective 6

## Second Year - Second Semester

- Dissertation

## Pool of Electives for : Deep Learning Specialization

- Unsupervised Deep Learning
- Graph Neural Networks
- ML System Optimization
- Fair Interpretable Trustworthy Machine Learning

## Pool of Electives for : NLP Specialization

- NLP Applications
- Social Media Analytics
- Natural Language Processing
- Information Retrieval
- Conversational AI

## General Pool of Electives

- MLOps
- Design of Algorithms
- Computer Vision
- Probabilistic Graphical Models

- Data Management for Machine Learning
- Video Analysis.
- Advanced Data Mining
- AI and ML techniques for Cyber Security





## Pool of Electives - Audio and Vision

### Course Title

- Computer Vision #
- 3D Computer Vision
- Audio Analysis #
- Video Analysis
- Computational Photography
- Computational Imaging
- Multimodal Information Retrieval
- Contemporary Computer Graphics

# At least 3 courses are required including those marked with #

## Pool of Electives - General

### Course Title

- MLOps
- Data Management for Machine Learning
- Advanced Data Mining
- Design of Algorithms
- AI and ML for Robotics
- AI and ML Techniques for Cyber security
- Probabilistic Graphical Models
- Metaheuristics for Optimization
- Automated Reasoning
- Quantum Machine Learning
- Software Engineering for Machine Learning
- Introduction to Parallel and Distributed Programming
- API Driven Cloud Native Solutions

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



# Eligibility Criteria

- Employed professionals holding B.E. / B.Tech. with at least 60% aggregate marks and minimum one-year relevant work experience after the completion of the degree are eligible to apply.
- Employed professionals holding MCA / M.Sc. or equivalent with at least 60% aggregate marks with university level mathematics / statistics as mandatory subjects and minimum one-year relevant work experience after the completion of the degree are also eligible to apply.
- Working knowledge of Computing and programming is required.



# Fee Structure

Fee Structure for students admitted in Academic Year 2025-2026 is as follows:



## 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 and secure online process using Aadhaar and PAN number
- Anyone with a Salary Account with Netbanking can apply the Option to submit fee using easy- EMI with 0% interest and 0 down payment

**Admissions open. Last date to apply is June 16, 2025.**

[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.



# Course-wise Syllabus

## Mathematical Foundations for Data Science

Vector and matrix algebra, Systems of linear algebraic equations and their solutions, Eigenvalues, eigenvectors and diagonalization of matrices, Multivariate calculus, vector calculus, Jacobian and Hessian, multivariate Taylor series, Gradient descent, unconstrained optimization, constrained optimization, nonlinear, optimization, Stochastic gradient descent, Dimensionality reduction and PCA, Optimization for support vector machines.

## Introduction to Statistical Methods

Basic probability concepts, Conditional probability, Bayes Theorem, Probability distributions, Continuous and discrete distributions, Transformation of random variables, Estimating mean, variance, covariance, Hypothesis Testing, Maximum likelihood, ANOVA – single factor, dual-factor, time series analysis: AR, MA, ARIMA, SARIMA, sampling based on distribution, statistical significance, Gaussian Mixture Model, Expectation Maximization.

## Artificial and Computational Intelligence

Introduction to Intelligent Agents, Search-based agents - Informed and Uninformed searches, Local Search Algorithms - Hill Climbing, Simulated Annealing, Local Beam Search, Genetic Algorithms, ACO, PSO, Minimax Algorithm, Alpha Beta Pruning, Knowledge Representation and Reasoning: Logical Agents - Representation and reasoning using propositional and predicate logic, Resolution, forward and backward chaining, DPLL, Probabilistic Reasoning - Knowledge representation using Bayesian networks, exact and approximate inference from bayesian networks, Hidden Markov Models, Ethics in AI: Explainable AI.

## Machine Learning

Introduction to Machine Learning, Various kinds of learning, Supervised Learning, Unsupervised Learning, Model Selection; Bayesian Learning, MAP Hypothesis, MDL Principle, Bias Variance, Decomposition, Bayes Optimal Classifier, Naive Bayes Classifier; Linear Models for Regression, Linear Models for Classification; Non-Linear models, Decision trees; Instance Based Learning, KNN Algorithm, Support Vector Machines, Ensemble methods: Random Forest, Bagging, Boostin.



## Deep Neural Networks

Introduction to neural networks, Approximation properties, Back propagation, Deep network training, Regularization and optimization, Convolution neural networks, Recurrent neural networks, Attention models, Transformers, Neural architecture search, federated learning, meta-learning, applications in time series modelling and forecasting, online (incremental) learning.

## Deep Reinforcement Learning

Introduction and applications, Markov decision processes (MDP), Tabular MDP planning, Tabular RL policy evaluation, Q-learning, model-based RL, Deep RL with function approximation, Policy search, policy gradient, fast learning, applications in game playing, imitation learning, RL for neural architecture search, batch RL.

## Unsupervised Deep Learning

Introduction to Representation Learning, PCA and variants, likelihood-based models, flow models, autoregressive models latent variables, Deep autoencoders, Boltzmann Machines, Generative Adversarial learning, Variants of GAN and applications, DeepDream, neural style transfer, self-supervised learning, semi-supervised learning, language model learning, applications in time series modelling, representation learning for reinforcement learning, deep clustering.

## Graph Neural Networks

Basics of graph theory, Machine learning on graphs, node embeddings, link analysis, representation learning for graphs, Label propagation for node classification, empirical risk minimization, graph convolutional filters, Composition with pointwise nonlinearities, permutations, dilation and stability, transferability, graph RNN, algebraic neural networks, applications of graph NN in subgraph mining, Recommendation systems, community structures in networks, deep generative models, knowledge graph embeddings and reasoning.

## ML System Optimization

Review of parallel and distributed systems, System Performance Trade-offs, Distributed machine learning for large models and datasets, General-purpose distributed computing frameworks - Hadoop, map reduce and Apache Spark, Deep Learning frameworks and runtimes, deep learning hardware, Deep learning compilers with optimizations, scalable training and Inference Serving, parameter serving, Federated Learning, model compression for optimizing communication and resource-constrained devices, Case studies of machine learning on single GPU systems, on GPU Clusters.

## Fair Interpretable Trustworthy Machine Learning

Biases and fairness, Fair representation learning, Interpretability and Transparency, Example and Visualization Based Methods for Interpretability, Interpreting deep neural networks, Fairness Through Input Manipulation, Fair NLP/Vision, Robustness and adversarial attacks/defence, ML auditing, privacy.



## **NLP Applications**

Sentiment Analysis, Grammar and Spelling Checkers, Cross Lingual Language Models, Machine Translation including Indic Languages, Question answering and Chatbots, Information extraction (named entity recognition, relation extraction), Knowledge graph.

## **Social Media Analytics**

Social Media Platforms, NLP in SMA, Text Summarization, Opinion Science and dynamics, ML/DL in SMA- Community detection, Ethical Social Media, Case Studies- Role of social media in disaster management, SM driven mental health and behaviour Analysis.

## **MLOps**

Adaptation of DevOps for building and deploying machine learning systems, Model Deployment: Infrastructure requirements, Deployment patterns, Model CI/CD (Build, Test, Integration and Delivery of model), Model Serving tools and technologies, Model life cycle management, ML pipelines with data management support, model assessment, evolution, and management in production, MLOps infrastructure and tools, Trends in Model deployment: ML on the Cloud / Edge / Browsers, VMs, Containers, Docker, Kubernetes (K8S), FaSS; ML-as-a-Service.

## **Computer Vision**

Image formation, structure, and transformations, Low-level (filters, features, texture), Mid-level(segmentation, tracking, morphology) and High-Level Vision (registration contour geometry, Object detection and classification, segmentation), Deep learning for object detection, Recognition, Face detection and face recognition, Facial key point recognition, Optical Character, Recognition, Visual annotation, Activity recognition, Applications for autonomous cars – Landmark detection and tracking, track pedestrians, 3D projection, Image search and retrieval, Edge devices for computer vision

## **Probabilistic Graphical Models**

HM, Markov Random Field, Bayesian networks, Representation, Learning, Inference, Dynamic Bayesian Networks and Temporal Bayesian networks, applications.

## **Data Management for Machine Learning**

Data Models and Query Languages: Relational, Object-Relational, NoSQL data models, Declarative (SQL) and Imperative (MapReduce) Querying, Data Encoding: Evolution, Formats, Models of dataflow, Machine learning workflow, Data management challenges in ML workflow, Data Pipelines and patterns, Data Pipeline Stages: Data extraction, ingestion, cleaning, wrangling, versioning, Transformation, exploration, feature management, Modern Data Infrastructure: Diverse data sources, Cloud data warehouses and lakes, Data Ingestion tools, Data transformation and modelling tools, Workflow orchestration platforms, ML model metadata and Registry, ML Observability, Data privacy and anonymity.





## Natural Language Processing

Natural Language Understanding and Generation, N-gram and Neural Language Models, Introduction to LLM, Introduction to prompt engineering, Word to Vectors / Word Embedding (Skip gram/CBOW, BERT), Part of Speech Tagging, Parsing, Word Sense Disambiguation, Semantic Web and Knowledge Graph, Introduction to Retrieval Augmented Generation (RAG).

## Video Analysis

Digital Video, Spatio temporal sampling, Low-Level Features to High-Level Semantics, Video enhancement technologies (denoising, stabilization, unsharp masking, super-resolution), Background modelling and Foreground Detection; ML techniques for Video Motion Detection, Tracking, Compression, Indexing and Retrieval, Browsing and Summarization, Applications in License plate detection on moving vehicles, monitoring traffic jams, Activity recognition, Crowd management and gesture recognition.

## Information Retrieval

Organization, Representation and access to information, Categorization, indexing, and content analysis, Data structures for unstructured data; design and maintenance of such data structures, Indexing and indexes, retrieval and classification schemes; use of codes, formats, and standards; analysis, construction and evaluation of search and navigation techniques; search engines and how they relate to the above, Multimedia data and their representation and search.

## Conversational AI

Intro to conversational AI. Use cases of chatbots, NLU and Dialog Management, Design the flow of conversation, Crafting training data, Training the NLU model, Understanding Dialog Management, Intent classification and entity extraction, Using slots for context understanding, Understanding NLU components, Supporting multiple languages, Voice bots, Testing the bot, Failing gracefully with fall back action

## AI and ML Techniques for Cyber Security

Introduction to Cyber-Security, Supervised Learning for Misuse/Signature Detection, Machine Learning for Anomaly Detection, Malware detection and classification; Network Intrusion detection and classification, Detection and categorization of domain names; Profiling Network Traffic; Adversarial Machine Learning for Malware detection.

## Quantum Machine Learning

The course focuses on Quantum computing applications particularly with respect to Machine learning and artificial intelligence. It showcases real time applications based on quantum machine learning. Insights on data science models using qubits and quantum data sets are explained. It also describes different quantum machine learning algorithms with optimisations that need to be carried out in the classical computing domain for implementing the paradigm shift.



## Large Language Models for Generative AI

Training Paradigm of LLM; Optimizing LLM, Multi-Query Attention, Grouped-query attention, Quantization, Pruning, Distillation; Fine-Tuning Parameter Efficient Fine Tuning (PEFT), Instruction fine Tuning, Preference tuning, Reinforcement Learning from Human Feedback (RLHF), Evaluating LMs; Prompting and In-context Learning-prompting techniques, LLM reasoning, Chain-of-Thought Prompting, Tree-of-Thought, Evaluating Prompted LMs; Enhancing Pre-trained LMs using additional knowledge-Augmenting LMs using Knowledge Graph, Textual Encoding of Tables, Retrieval-based LMs, Multimodal LMs - Vision LMs, Popular multimodal LMs, LMs of Code; Small Language Models; Bias, Hallucinations and Toxicity, Detoxification techniques, Privacy attacks of LLMs, Memorization, Prompt Hacking, Adversarial attacks.

## Multimodal Information Retrieval

Encompasses fundamental concepts of information retrieval (IR), expanding into multimodal approaches that combine real-world text, images, audio, video, and other forms of data. Topics include: Introduction to Multimodal Information Retrieval, Fundamentals of Information Retrieval, Textual Information Retrieval and Pre-processing, Introduction to Multimodal Systems, Feature Extraction for Visual Data (Images), Visual Information Retrieval (VIR), Audio Information Retrieval, Video Information Retrieval (VIR), Multimodal Retrieval: Early Fusion, Multimodal Retrieval: Late Fusion, Cross-Modal Retrieval, Deep Learning for Multimodal Information Retrieval, Evaluation of Multimodal Retrieval Systems, Challenges and Future Directions in Multimodal IR.

## Contemporary Computer Graphics

Basics of Computer Graphics, Applications of machine learning, Image Representation, Geometrical Transformations in 2D and 3D, 3D Modeling and Scene Representation, Shape recognition with AI, Machine learning for texture mapping and segmentation, Rendering Basics, ML for denoising in ray tracing, deep learning for image super resolution, Animation Basics, AI for motion capture data processing, Reinforcement learning for animation and game physics, Texture Mapping, Generative Adversarial Networks (GANs) for texture generation, Deep learning for material recognition and synthesis, AI in automated 3D object recognition and placement in scenes, Computer



Vision Algorithms for 3D graphics, Deep learning for pose estimation and tracking in 3D graphics, Real-time Rendering, AI for procedural content generation, ML for rendering, Generative Adversarial Networks (GANs) for image generation, Style transfer in images and animations, GANs for generating realistic 3D models, AI in automated 3D object recognition and placement in scenes, AI-based colorization and artistic effects, VR rendering techniques, head-tracking, and user interaction, AI for object recognition in AR, Deep learning for AR scene reconstruction and interaction, Deep learning for automatic photo editing and enhancement AI-based image stitching and panorama generation, Generative models for landscapes, cityscapes, and environments.

## **Software Engineering for Machine Learning**

Machine Learning in Production: Introduction, From models to systems, Machine learning for software engineers; Requirements Engineering: When to use ML, Gathering requirements; Architecture and Design: Thinking like a software architect, Quality attributes of ML components, Automating ML pipeline, Scaling the system, Planning for operations; Coding practices: What is good code, Analyzing code performance, Using data structures effectively, OOP and functional programming, Errors, Logging & Debugging, Code formatting and linting, documentation, APIs; Sharing code: Version control, Dependencies, Packaging; Testing and Quality Assurance: Types of tests, Testing for ML, Testing model training, Testing model inference, Model quality, Data quality, Pipeline quality, System quality, Testing and experimenting in production; Automation and Deployment; Security for Machine Learning; Process and Teams: Data science and software engineering process models, Interdisciplinary teams; Responsible ML Engineering: Responsible Engineering, Provenance, Reproducibility, Interpretability, Security and Privacy.

## **Machine Learning on the Edge**

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; Small Language Models, 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.



# Programme Structure

## Core Courses (6)

### Course Title

- Mathematical Foundations for Machine Learning
- Introduction to Statistical Methods
- Artificial and Computational Intelligence
- Machine Learning
- Deep Neural Networks
- Deep Reinforcement Learning

## Pool of Electives Deep Learning Specialization

### Course Title

- Unsupervised Deep learning#
- Graph Neural Networks
- Distributed Machine Learning
- ML System Optimization
- Fair, Interpretable, Trustworthy Machine Learning
- Computational Learning Theory
- Machine Learning on the Edge

# At least 3 courses are required including the course marked in #

## Pool of Electives NLP Specialization

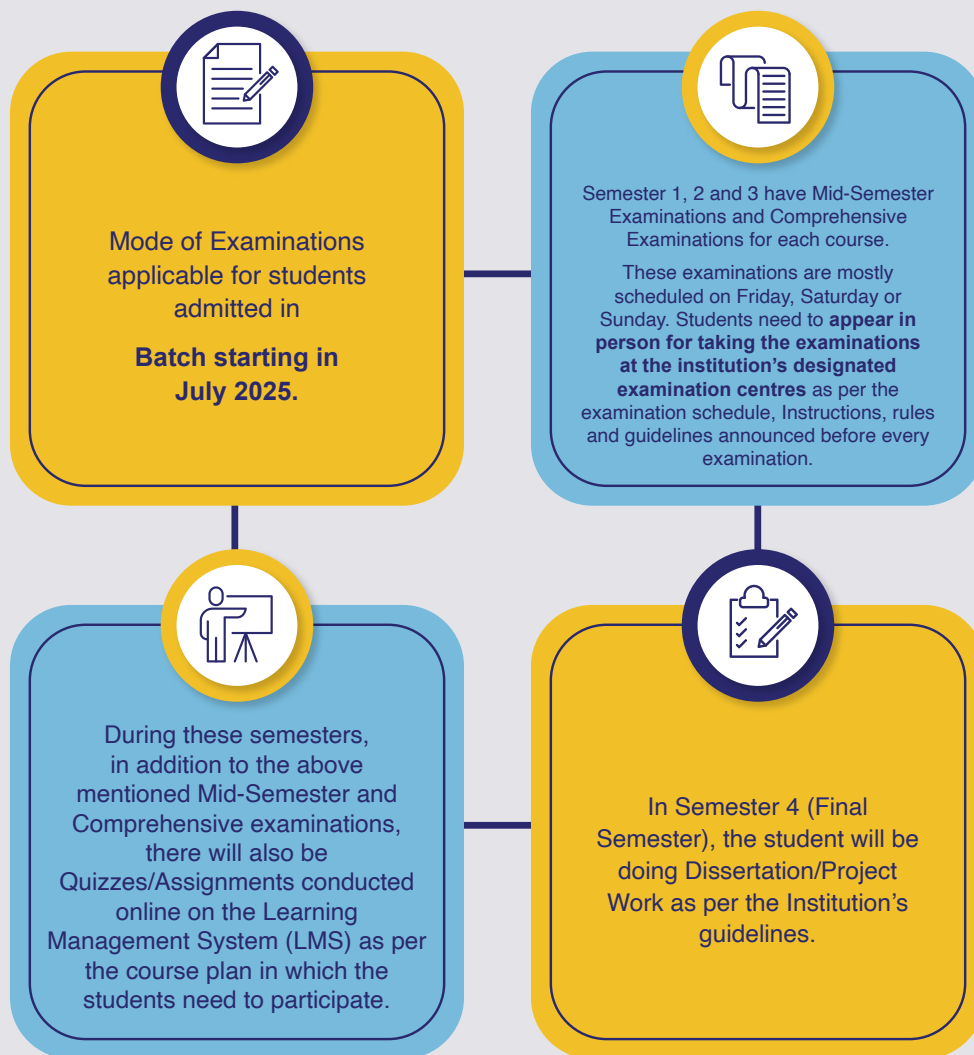
### Course Title

- Natural Language Processing #
- NLP Applications
- Information Retrieval
- Speech Processing
- Conversational AI
- Social Media Analytics
- Large Language Models for Generative AI

# At least 3 courses are required including those marked with #



# Mode of Examination



Students can take their examination at any of our **34 designated examination centres in India** at the following locations:

- **South Zone:** Bangalore, Chennai, Hyderabad, Mysore, Vijayawada, Visakhapatnam, Kochi, Thiruvananthapuram, Madurai, Coimbatore.
- **North Zone:** Delhi NCR, Gurugram, Noida, Faridabad, Jaipur, Chandigarh, Lucknow, Udaipur, Pilani.
- **West Zone:** Mumbai, Pune, Ahilya Nagar, Goa, Ahmedabad, Vadodara, Surat, Indore, Nagpur, Bhopal, Raipur.
- **East Zone:** Kolkata, Guwahati, Jamshedpur, Bhubaneswar.

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



### 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.

#### Requirements for online examinations

- o 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,  
(OR)
- o Scanned copy of government-issued ID from the residing country,  
(And)
- o 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**  
through the BITS  
Pilani online  
application centre.



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**.



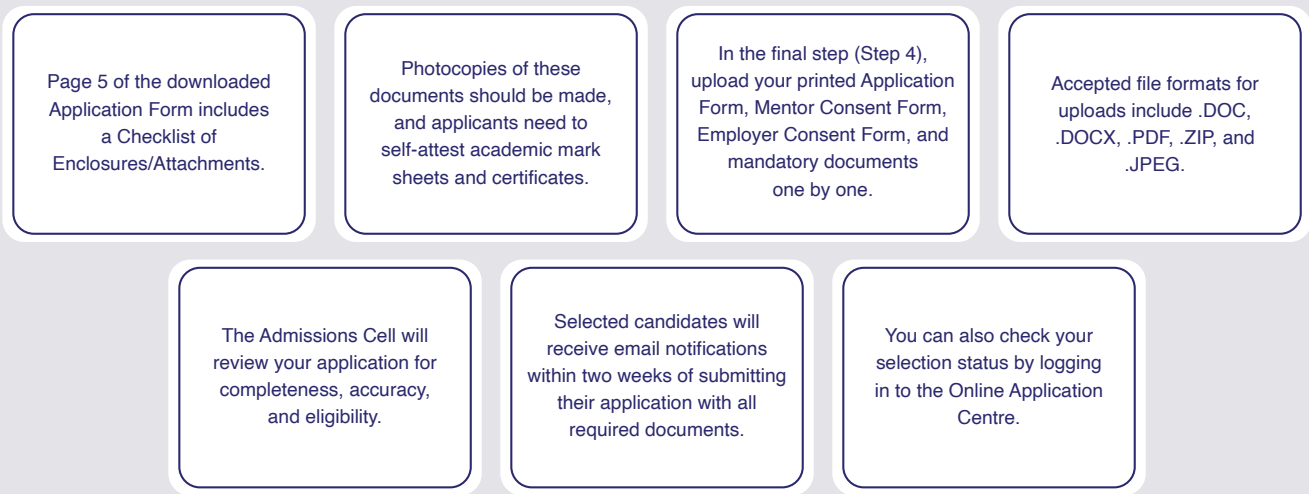
## Role of a Mentor:

The basic role of the mentor will be to ensure that the student remains aligned with the academic objectives and the key academic milestones while pursuing the programme. The mentor’s valuable guidance and professional expertise would also be leveraged to maximise work-integrated learning and make the education experience highly relevant for the job role and pursuit of the long-term career goals of the student. Following are the expected responsibilities of the mentor:

1. Periodically monitor student’s study schedules and submission deadlines for the programme.
2. Provide guidance towards integrating learning from the programme with job role/long-term career goals, especially while the student pursues their learning assignments and project work.
3. Monitor the student’s progress throughout the duration of the programme. If required by BITS Pilani, also try to be available to engage with the faculty to collaboratively assess the student’s academic performance and recommend any learning improvement plan.
4. Emphasise the importance of self-study and self-learning throughout the programme to the student.

## Qualifications for a Mentor:

The mentor chosen should be a senior professional with at least 5 years of relevant work experience, holding a B.E./ B.Tech./ M.Sc./ M.B.A./ M.B.B.S./ First Degree at BITS Pilani or its equivalent. If the mentor has less than 5 years of relevant work experience, then the minimum educational qualification for the mentor should be M.E./ M.Tech./ M.S./ M.Phil./ Higher Degree of BITS Pilani or its equivalent is required.



## UGC Approval

BITS Pilani is an Institution of Eminence under UGC (Institution of Eminence Deemed to be Universities) Regulations, 2017. The Work Integrated Learning Programmes (WILP) of BITS Pilani constitutes a unique set of educational offerings for working professionals. WILP are an extension of programmes offered at the BITS Pilani Campuses and are comparable to our regular programmes both in terms of unit/credit requirements as well as academic rigour. In addition, it capitalises and further builds on practical experience of students through high degree of integration, which results not only in upgradation of knowledge, but also in up skilling, and productivity increase. The programme may lead to award of degree, diploma, and certificate in science, technology/engineering, management, and humanities and social sciences.

On the recommendation of the Empowered Expert Committee, UGC in its 548th Meeting held on 09.09.20 has approved the continued offering of BITS Pilani's Work Integrated Learning programmes.

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# Students **Speak**



BITS Pilani WILP provided me with the opportunity to pursue a structured Master's programme without me having to leave my job. I was able to enhance my expertise in Python, Machine Learning, NLP, and Deep Learning, enabling me to successfully transition from a business consultant to a project engineer specializing in AI. Further, the faculty at BITS Pilani WILP were outstanding and had rich industry experience. The flexibility of online lectures and access to recorded sessions enabled me to effectively balance my professional, personal, and academic commitments.

## **Anand Jha**

Lead Data Engineer - AI, Intellect Design Alumnus



BITS Pilani WILP enabled me to enhance my skills while continuing to work, providing a comprehensive understanding of Data Mining, Machine Learning, AI, and Big Data Systems, which significantly boosted my problem-solving and analytical abilities. The hands-on tools and remote labs bridged the gap between theory and practice, allowing me to confidently apply advanced technologies to real-world challenges. For my final semester project, I focused on cross-selling products by analyzing customer data and behavior, integrating data mining and machine learning techniques to turn theoretical concepts into actionable insights and showcasing the programme's real-world relevance.

## **Nikhila**

Senior Data Analyst, Citi Alumnus



BITS Pilani WILP played a key role in my transition from an SAP developer to an AI architect, providing me with industry-relevant skills that enabled me to handle complex projects and contribute at a higher level within my organization, all while seamlessly balancing work and academics. The programme's focus on continuous learning expanded my horizons, giving me the confidence to explore new opportunities. The combination of theoretical knowledge, practical tools, and strong mentor support made this journey a key milestone in both my personal and professional development.

## **Manasa**

AI Architect Alumnus





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