

QUALIFICATION FILE

Artificial Intelligence/Machine Learning Innovative Analyst

☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☐ Apprenticeship

☒ Upskilling ☐ Dual/Flexi Qualification ☐ For ToT ☐ For ToA

☐ General ☐ Multi-skill (MS) ☐ Cross Sectoral (CS) ☒ Future Skills ☐ OEM

NCrF/NSQF Level: 5

Submitted By:

**IIT Guwahati,
Amingaon, North Guwahati,
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Table of Contents

Section 1: Basic Details.....	3
Section 2: Module Summary	8
NOS/s of Qualifications	8
Mandatory NOS/s:.....	8
Elective NOS/s:.....	9
Optional NOS/s:.....	9
Assessment - Minimum Qualifying Percentage.....	9
Section 3: Training Related	10
Section 4: Assessment Related	10
Section 5: Evidence of the need for the Qualification.....	11
Latest Skill Gap Study (not older than 2 years) (Yes/No):	11
Section 6: Annexure & Supporting Documents Check List	14
Annexure: Evidence of Level.....	15
Annexure: Tools and Equipment (Lab Set-Up).....	19
Annexure: Industry Validations Summary	20
Annexure: Training & Employment Details (If there is any estimation from your end).....	21
Annexure: Blended Learning	22
Annexure: Detailed Assessment Criteria.....	22
Annexure: Assessment Strategy.....	29
Justification of the nomenclature of the qualification	32
Annexure: Acronym and Glossary	34

Section 1: Basic Details

1.	Qualification Name	Artificial Intelligence/Machine Learning Innovative Analyst	
2.	Sector/s	IT/ITeS	
3.	Type of Qualification: ☒ New ☐ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing/previous qualification: (change to previous, once approved)	Qualification Name of existing/previous version: NA
4.	a. OEM Name b. Qualification Name: (Wherever applicable)	Artificial Intelligence/Machine Learning Innovative Analyst	
5.	National Qualification Register (NQR) Code & Version (Will be issued after NSQC approval)	QG-05-IT-04148-2025-V1-IITG	6. NCrF/NSQF Level: 5
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other (Wherever applicable specify multiple entry/exits also & provide details in annexure)	Certificate	
8.	Brief Description of the Qualification	Learners with the ability to extract insights from complex datasets, using statistical and machine learning techniques. They gain proficiency in developing predictive models and algorithms that enable systems to make autonomous decisions based on data. Learners also learn to evaluate model performance and communicate findings effectively through data visualization and storytelling. Moreover, they acquire an understanding of ethical considerations and responsible AI practices, ensuring their work aligns with societal values and norms. Overall, studying data science and AI/ML empowers learners to leverage data-driven approaches for solving real-world problems across diverse industries.	
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience:	

			<table border="1"> <tr> <th>S. No</th><th>Academic/Skill Qualification (with Specialization - if applicable)</th><th>Required Experience (with Specialization - if applicable)</th></tr> <tr> <td>1</td><td>Completed 2nd year UG (in case of 4-year UG) Degree **</td><td>No Experience Required</td></tr> <tr> <td>2</td><td>Completed 2 years of 3-Year UG Degree **</td><td>No Experience Required</td></tr> <tr> <td>3</td><td>Completed 3-year diploma after 10th Grade</td><td>1.5-years relevant experience **</td></tr> <tr> <td>4</td><td>Previous relevant Qualification of NSQF Level 4.5 and above</td><td>1.5 years relevant experience **</td></tr> </table> ** Experience in IT, Electronics, Electrical, Computer Science field b. Age:	S. No	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	Completed 2nd year UG (in case of 4-year UG) Degree **	No Experience Required	2	Completed 2 years of 3-Year UG Degree **	No Experience Required	3	Completed 3-year diploma after 10th Grade	1.5-years relevant experience **	4	Previous relevant Qualification of NSQF Level 4.5 and above	1.5 years relevant experience **		
S. No	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)																		
1	Completed 2nd year UG (in case of 4-year UG) Degree **	No Experience Required																		
2	Completed 2 years of 3-Year UG Degree **	No Experience Required																		
3	Completed 3-year diploma after 10th Grade	1.5-years relevant experience **																		
4	Previous relevant Qualification of NSQF Level 4.5 and above	1.5 years relevant experience **																		
10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	17	11. Common Cost Norm Category (I/II/III) (wherever applicable): NA																	
12.	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	(open source platform/software) or Free version for Academic purpose																		
13.	Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	☐ Offline ☐ Online ☒ Blended <table border="1"> <tr> <th>Training Delivery Modes</th><th>Theory (Hours)</th><th>Practical (Hours)</th><th>OJT Mandatory (Hours)</th><th>OJT Recommended (Hours)</th><th>Total (Hours)</th></tr> <tr> <td>Classroom (offline)</td><td>80</td><td>70</td><td>60</td><td></td><td rowspan="2">510</td></tr> <tr> <td>Online</td><td>200</td><td>100</td><td></td><td></td></tr> </table> (* This qualification can be implemented in online, offline as well as blended mode. In case of Blended mode {Theory 200hrs online 80 hrs. offline}, {Practical 100 hrs. online 70 hrs. offline} {OJT 90 hrs. offline for all modes of delivery})		Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	80	70	60		510	Online	200	100		
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)															
Classroom (offline)	80	70	60		510															
Online	200	100																		

		1) <i>Scenario-based open book test & one-to-one online viva.</i> 2) <i>Monthly feedbacks will be taken to evaluate if the learners are meeting the intended learning outcomes.</i> 3) <i>MCQ (Online) Weekly</i> 4) <i>Industry use case Scenarios will be provided as Problem Statements in the LMS Platform for which the projects needs to be deployed, Assessment will be done with the projects Tested and Submitted for evaluation and Practical Hands On for Industry aligned Project Scenarios.</i> 5) <i>In Offline and Blended modes, final assessment will be offline in Test centers across India.</i> ➤ <i>Theory Exam 160 Marks</i> ➤ <i>Practical Exam 165 Marks</i> ➤ <i>Project 220 Marks</i> ➤ <i>Viva 55 Marks</i>
14.	Aligned to NCO/ISCO Code/s (if no code is available mention the same)	2152.0501, 2512.0201, 2512.0101
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	Entry-Level Roles 1) Data Analyst: Analyze data sets to identify trends and patterns, produce reports, and support decision-making processes. 2) Junior Data Scientist: Work on data collection, preprocessing, and basic model building under the supervision of senior team members. 3) Machine Learning Engineer: Develop and implement machine learning models, ensuring their scalability and performance in production environments. 4) Business Intelligence (BI) Analyst: Create dashboards and reports to help businesses make informed decisions based on data insights. Mid-Level Roles (Minimum 2 years experience in Entry Level Roles) 1) Data Scientist: Independently handle the end-to-end process of data analysis, model development, and implementation. Focus on complex problems and derive actionable insights.

		2) Senior Data Scientist: Lead projects, mentor junior team members, and develop advanced machine learning algorithms and predictive models. 3) AI Specialist/Engineer: Design and deploy AI solutions, such as natural language processing (NLP) systems, computer vision models, and deep learning networks. 4) Data Engineer: Build and maintain data pipelines, databases, and large-scale processing systems to support data science workflows. Senior-Level Roles (Minimum 3 - 4 years' experience in Mid-Level Roles) 1) Lead Data Scientist: Oversee data science teams, manage large-scale projects, and collaborate with other departments to integrate data-driven strategies. 2) Data Science Manager: Manage a team of data scientists and analysts, ensure project alignment with business goals, and strategize data initiatives. 3) Chief Data Officer (CDO): Lead the data strategy of the organization, ensuring data governance, compliance, and leveraging data for business growth. 4) AI/ML Architect: Design and implement large-scale AI and machine learning systems and solutions for complex business problems. Academic Progression Path 1) Postgraduate Studies : Master's Degree in Data Science/AI/ML: Gain deeper theoretical knowledge and practical skills in specialized areas such as deep learning, advanced analytics, and big data technologies. 2) Professional Certifications: Obtain certifications from recognized institutions (e.g., Google, IBM, Microsoft) in specific tools and methodologies such as TensorFlow, PyTorch, AWS, or Azure. 3) Doctoral Studies : Ph.D. in Data Science/AI/ML: Conduct original research, contribute to academic literature, and specialize in a niche area of data science or AI.
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Bilingual
17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	☐ Yes ☒ No URLs of similar Qualifications:
18.	Is the Job Role Amenable to Persons with Disability	☒ Yes ☐ No If "Yes", specify applicable type of Disability: Disability in Legs resulting limited mobility

19.	How Participation of Women will be Encouraged	Encouraging the participation of women in Data Science / AI ML programs is essential for fostering diversity and ensuring a broader range of perspectives in the field. How will it be done: 1. 10% reservation of seats per batch for women. 2. Mentorship Programs: Establishing mentorship programs where experienced women in Data Science / AI ML can mentor and guide aspiring female data scientists. Encourage women already in the field to serve as role models and share their experiences. 3. Networking and Community Building: Creating opportunities for women in Data Science / AI ML to connect and network with peers and professionals. Host women-focused Data Science / AI ML conferences, seminars, and meetups.	
20.	Are Greening/ Environment Sustainability Aspects Covered <i>(Specify the NOS/Module which covers it)</i>	☐ Yes ☒ No	
21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools ☐ Yes ☒ No Colleges ☒ Yes ☐ No	
22.	Name and Contact Details of Submitting / Awarding Body SPOC <i>(In case of CS or MS, provide details of both Lead AB & Supporting ABs)</i>	Name: Prof. Gaurav Trivedi Email: trivedi@iitg.ac.in Contact No.: +91 -8011000783 Website: https://www.iitg.ac.in/trivedi/index.html	
23.	Final Approval Date by NSQC: 08.05.2025	24. Validity Duration: 3 years	25. Next Review Date: 08.05.2028

NSQC

Section 2: Module Summary

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer curriculum document.

Th.-Theory **Pr.**-Practical **OJT**-On the Job **Man.**-Mandatory Training **Rec.**-Recommended **Proj.**-Project

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core / Non-Core	NCrF/NSQ F Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	Introduction to Data Science using Python	IITG/AIML01/NoS/N01	Core	5	2	40	15	5	0	60	20	30	40	10	100	16.67
2.	Mastering SQL and Visualization Tool – Tableau	IITG/AIML01/NoS/N02	Core	5	2	20	30	10	0	60	20	30	40	10	100	16.67
3.	AI/ML: The Future is Now	IITG/AIML01/NoS/N03	Core	5	5	60	65	25	0	150	40	60	80	20	200	33.33
4.	Advanced NLP with Deep Learning and RL	IITG/AIML01/NoS/N04	Core	5	6	100	60	20	0	180	30	45	60	15	150	25
5.	Employability Skills	DGT/VSQ/N0102	Non-Core	5	2	60				60	50				50	8.33
Duration (in Hours) / Total Marks					17	280	170	60		510	160	165	220	55	600	100

Elective NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core / Non-Core	NCrF/NSQ F Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT - Man.	OJT - Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.																
2.																
Duration (in Hours) / Total Marks																

Optional NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core / Non-Core	NCrF/NSQ F Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT - Man.	OJT - Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.																
2.																
Duration (in Hours) / Total Marks																

Assessment - Minimum Qualifying Percentage

Please specify **any one** of the following:

Minimum Pass Percentage – Aggregate at qualification level: 70 % (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

Minimum Pass Percentage – NOS/Module-wise: ____ % (Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) <i>(as per NCVET guidelines)</i>	Minimum: A bachelor's degree in a related field such as computer science, statistics, mathematics, engineering, or a relevant quantitative discipline. Years of Industry Experience: Entry-Level Instructors: At least 2-3 years of relevant industry experience is generally considered a minimum for entry-level instructors. Intermediate Instructors: 4-6 years of experience may be expected for instructors teaching intermediate-level Data Science / AI ML topics. Experience in Data Science / AI ML Roles: a. Trainers should have direct experience working in Data Science / AI ML roles, such as data analyst, data scientist, machine learning engineer, or related positions. Practical experience is crucial for conveying real-world insights, challenges, and best practices to students.
2.	Master Trainer's Qualification and experience in the relevant sector (in years) <i>(as per NCVET guidelines)</i>	A bachelor's degree in a related field such as computer science, statistics, mathematics, engineering, or a relevant quantitative discipline. Minimum 6 years of experience in the relevant field.
3.	Tools and Equipment Required for Training	☒ Yes ☐ No <i>(If "Yes", details to be provided in Annexure)</i>
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	NA

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	A bachelor's degree in a related field such as computer science, statistics, mathematics, engineering, or a relevant quantitative discipline. Minimum 4 years of experience in the relevant field.
2.	Proctor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	A bachelor's degree in a related field such as computer science, statistics, mathematics, engineering, or a relevant quantitative discipline. Minimum 4 years of experience in the relevant field.

3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	A bachelor's degree in a related field such as computer science, statistics, mathematics, engineering, or a relevant quantitative discipline. Minimum 6 years of experience in the relevant field.
4.	Assessment Mode (Specify the assessment mode)	Online, Offline
5.	Tools and Equipment Required for Assessment	☒ Same as for training ☐ Yes ☐ No (details to be provided in Annexure-if it is different for Assessment)

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): Reports Referenced: • State of Data Science & AI Skills in India - INDIAai (August 2022) [reference this report as "State of Data Science & AI Skills in India - INDIAai"] • Skills Gaps in AI Worry Executives and Stall Progress, Report Shows - Skillsoft [reference this report as "Skills Gaps in AI Worry Executives and Stall Progress, Report Shows - Skillsoft"] Key Findings: • High Demand & Growing Gap: There's a substantial and growing demand for Data Science & AI/ML professionals. Reports estimate a gap between 51% (IndiaAI) and a much larger, unquantified gap globally (Skillsoft). • Specific Skill Shortages: Certain job roles within Data Science & AI/ML experience a more significant shortage. These include: ○ ML Engineer ○ Data Scientist ○ DevOps Engineer ○ Data Architect (State of Data Science & AI Skills in India - INDIAai) • Technical Skills in Demand: ○ Machine Learning: Techniques like deep learning, natural language processing (NLP), and computer vision are crucial (Skillsoft). ○ Big Data Analytics: Handling and analyzing vast datasets is essential (State of Data Science & AI Skills in India - INDIAai). ○ Programming Languages: Proficiency in Python, R, and Java is highly sought after (both reports). • Non-Technical Skills Gap: The reports also highlight a gap in soft skills like:
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	○ Communication: Effectively communicating insights and findings to both technical and non-technical audiences. ○ Problem-Solving: Approaching data-driven problems with a creative and analytical mindset. ○ Business Acumen: Understanding the business context and how data science can be used to solve real-world problems. Course Design Considerations: ● Focus on in-demand technical skills: Include robust modules on Machine Learning and relevant programming languages like Python and R. ● Integrate real-world applications: Showcase how these skills are applied in various industries through case studies and projects. ● Develop strong communication skills: Incorporate assignments and presentations that hone students ability to explain technical concepts clearly. ● Don't neglect soft skills: Integrate problem-solving exercises and encourage discussions to develop critical thinking and analytical skills. ● Consider industry-specific tracks: Partner with IIT Guwahati to potentially offer specialized tracks in areas like healthcare, finance, or manufacturing.
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): Gartner's Magic Quadrant for Data Science and Machine Learning Platforms 2023: This report provides an overview of the key players in the data science and ML platform market, along with their strengths and weaknesses. McKinsey & Company's Report on AI Adoption 2022: This report details how businesses are adopting AI, the benefits they are seeing, and the challenges they face. Deloitte's State of AI in the Enterprise, 5th Edition (2023): This report explores the adoption, benefits, and challenges of AI technologies across various industries. IDC's Worldwide Artificial Intelligence Spending Guide 2023: This guide provides insights into the spending trends on AI technologies across different sectors. KPMG's AI Top Trends 2023: This report highlights the top trends in AI and machine learning, including advancements, challenges, and market opportunities.
3.	Government /Industry initiatives/ requirement (Yes/No): Government Initiatives in India National Strategy for Artificial Intelligence (NITI Aayog): Released by NITI Aayog, this strategy outlines a roadmap to harness AI for inclusive growth across key sectors such as healthcare, agriculture, education, smart cities, and infrastructure. The plan emphasizes the need for AI research and the establishment of centers of excellence. AI for All: Part of the National Strategy, this initiative aims to increase AI literacy and promote ethical AI usage. It focuses on making AI accessible to all sectors of society and emphasizes collaboration with industry and academia.

	Centre of Excellence in Artificial Intelligence (NITI Aayog): NITI Aayog has established several centers of excellence to spur AI research and innovation. These centers work on real-world applications and collaborate with industries to develop cutting-edge AI solutions. Responsible AI for Youth: Launched by the Ministry of Electronics and Information Technology (MeitY), this program targets school students to foster AI learning and innovation at an early age. It provides students with the resources and mentorship needed to develop AI-based projects. Industry Initiatives in India Tata Consultancy Services (TCS) AI Research: TCS has set up AI labs focused on advancing AI research in areas such as natural language processing, machine learning, and AI ethics. These labs collaborate with academic institutions to drive innovation. Wipro HOLMES: Wipro has developed an AI platform, HOLMES, which provides AI and automation solutions for various industries, including healthcare, finance, and retail. It focuses on improving operational efficiency and customer experience. Infosys Nia: Infosys Nia is an AI platform that combines big data analytics, machine learning, and cognitive automation to enable businesses to improve decision-making processes and operational efficiencies. Reliance Jio AI Initiatives: Reliance Jio is investing heavily in AI to enhance its telecom services and develop new AI-driven applications in healthcare, education, and agriculture. The company is also collaborating with global AI research organizations to bring advanced AI solutions to India.
4.	Number of Industry validation provided: 5
5.	Estimated nos. of persons to be trained and employed: 300
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Yes If "No", why:

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	Annexure: NCrf/NSQF level justification based on NCrf level/NSQF descriptors <i>(Mandatory)</i>	Provided
2.	Annexure: List of tools and equipment relevant for qualification <i>(Mandatory, except in case of online course)</i>	Provided
3.	Annexure: Detailed Assessment Criteria <i>(Mandatory)</i>	Provided
4.	Annexure: Assessment Strategy <i>(Mandatory)</i>	Provided
5.	Annexure: Blended Learning <i>(Mandatory, in case selected Mode of delivery is "Blended Learning")</i>	Provided
6.	Annexure: Multiple Entry-Exit Details <i>(Mandatory, in case qualification has multiple Entry-Exit)</i>	NA
7.	Annexure: Acronym and Glossary <i>(Optional)</i>	Provided
8.	Supporting Document: Model Curriculum <i>(Mandatory – Public view)</i>	Given Separately
9.	Supporting Document: Career Progression <i>(Mandatory - Public view)</i>	Professional: Data Analyst-> Data Engineer->Data Scientist->Lead Data Scientist
10.	Supporting Document: Occupational Map <i>(Mandatory)</i>	Technology and IT, Manufacturing, Telecommunications, Energy and Utilities, Transportation and Logistics, Retail and E-commerce, Media and Entertainment.
11.	Supporting Document: Assessment SOP <i>(Mandatory)</i>	Provided
12.	Any other document you wish to submit:	

Annexure: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
Professional Theoretical Knowledge/Process	Learners play a crucial role in helping organizations make data-driven decisions. Their job involves various elements and responsibilities, including: 1. Data Collection: Gathering data from various sources, which may include databases, spreadsheets, APIs, and external data sets. 2. Data Cleaning: Ensuring data accuracy by identifying and correcting errors, inconsistencies, and missing values in datasets. 3. Data Exploration: Analyzing data to identify trends, patterns, and anomalies. This involves creating visualizations, summarizing statistics, and generating insights. 4. Data Transformation: Converting raw data into a usable format for analysis. This may involve data normalization, aggregation, or restructuring. 5. Data Modeling: Developing statistical or machine learning models to answer specific business questions or solve problems. This includes regression analysis, clustering, classification, and more. 6. Data Visualization: Creating visual representations of data using tools like charts, graphs, and dashboards to make complex information understandable and actionable.	1. Data Handling and Preparation: Learners often spend a significant amount of time collecting, cleaning, and preparing data for analysis. The curriculum should include courses on data preprocessing, data wrangling, and data quality assurance to equip students with these essential skills. 2. Data Visualization: Learners are responsible for creating meaningful visualizations to communicate insights effectively. The program should include courses on data visualization techniques and tools to help students present their findings clearly. 3. Statistical Analysis: Learners use statistical methods to explore and analyze data. The curriculum should cover statistical concepts, hypothesis testing, regression analysis, and other relevant techniques to enable students to make data-driven decisions. 4. Programming Skills: Many Learners use programming languages like Python or R for data analysis. The program should teach these	5

	7. Data Interpretation: Extracting meaningful insights from data and translating them into actionable recommendations for decision-makers. 8. Reporting: Preparing regular reports and dashboards for stakeholders to track key performance indicators (KPIs) and monitor the health of business processes. 9. A/B Testing: Conducting experiments to assess the impact of changes and improvements in products or processes. 10. Data Communication: Effectively communicating findings and insights to non-technical stakeholders through presentations, reports, and meetings. 11. Implementing various supervised and unsupervised machine learning algorithms to solve real-world problems in collaboration with Industry 12. Applying ethical considerations in the development and deployment of AI and ML models.	languages and provide hands-on experience in using libraries and packages commonly used in data analysis. 5. Database Management: Learners often work with databases to extract, transform, and load data. The curriculum should introduce students to relational databases, SQL, and data querying techniques. 6. Applying AI/ML techniques to solve problems in current field or personal projects. 7. Transition into a data science/AI ML career or enhance your existing data analysis skills. 8. Gaining a competitive edge in the job market with sought-after data science/ AI ML skills.	
Professional and Technical Skills/ Expertise/ Professional Knowledge	1. Data Governance: Ensuring data quality, security, and compliance with relevant regulations and policies. 2. Continuous Learning: Staying up to date with industry trends, emerging tools, and best practices in data analysis and data science. 3. Problem Solving: Identifying business problems that can be addressed through data analysis and proposing data-driven solutions.	1. Machine Learning Fundamentals: While Learners typically focus on descriptive and diagnostic analytics, a foundational understanding of machine learning is valuable. The program can include courses on machine learning to help students understand its potential applications. 2. Business and Communication Skills: Learners must be able to communicate their findings	5

	4. Collaboration: Collaborating with cross-functional teams, including data engineers, business analysts, and domain experts, to achieve common goals. 5. Hypothesis Testing: Formulating and testing hypotheses to validate or refute assumptions and make informed decisions. 6. Time Series Analysis: Analyzing data over time to identify seasonality, trends, and forecasting future outcomes. 7. SQL and Database Skills: Proficiency in SQL to query and manipulate data in relational databases. 8. Programming: Using programming languages such as Python or R to perform data analysis, build models, and automate tasks. 9. Data Ethics: Adhering to ethical guidelines when working with sensitive or personal data, ensuring privacy and data protection. 10. Project Management: Managing data analysis projects, including defining objectives, timelines, and resource allocation.	effectively to both technical and non-technical stakeholders. The curriculum should include courses on business acumen, data storytelling, and communication skills. 3. Domain Knowledge: Data Science/ AI ML engineer often work in specific domains, such as healthcare, finance, or marketing. The program should allow students to specialize in their area of interest and gain domain-specific knowledge. 4. Ethical and Legal Considerations: Learners need to be aware of ethical and legal issues related to data privacy and security. The curriculum should cover these topics to ensure responsible data handling. 5. Project Work: Practical experience is crucial. The program should incorporate real-world projects or internships where students can apply their skills to solve actual data analysis problems.	
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	This well-design Data Science / AI ML Program can significantly contribute to entrepreneurship development in several ways: 1. Data-Driven Decision-Making: Entrepreneurs often need to make critical decisions about	1. Machine Learning Fundamentals: While Learners typically focus on descriptive and diagnostic analytics, a	5

	their businesses. A Data Science / AI ML program equips entrepreneurs with the skills to gather, analyze, and interpret data to make informed decisions. This can lead to better strategies, improved product development, and more effective marketing. 2. Market Research: Entrepreneurs can use Data Science / AI ML techniques to conduct market research and identify trends, customer preferences, and potential gaps in the market. This information can inform product or service development and market entry strategies. 3. Customer Analytics: Understanding customer behavior and preferences is crucial for any business. Data Science / AI ML enables entrepreneurs to analyze customer data, identify patterns, and tailor products or services to meet customer needs more effectively. 4. Predictive Analytics: Data Science / AI ML can be used for predictive modeling, allowing entrepreneurs to forecast future trends, demand, and business performance. This information is invaluable for resource allocation and planning. 5. Cost Optimization: Entrepreneurs can use data analytics to optimize costs and resource allocation, ensuring that they operate efficiently and maximize profits.	foundational understanding of machine learning is valuable. The program can include introductory courses on machine learning to help students understand its potential applications. 2. Business and Communication Skills: Learners must be able to communicate their findings effectively to both technical and non-technical stakeholders. The curriculum should include courses on business acumen, data storytelling, and communication skills. 3. Domain Knowledge: Learners often work in specific domains, such as healthcare, finance, or marketing. This program allows students to specialize in their area of interest and gain domain-specific knowledge. 4. Ethical and Legal Considerations: Learners need to be aware of ethical and legal issues related to data privacy and security. This curriculum covers these topics to ensure responsible data handling. 5. Project Work: Practical experience is crucial. The	
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		program incorporate real-world projects or internships where students can apply their skills to solve actual data analysis problems.	
Broad Learning Outcomes/Core Skill	Applies advance theoretical knowledge and specialized professional and technical skills involving complex variable environment and contexts	The program incorporates real-world projects or internships where students can apply their skills to solve actual data analysis problems.	5
Responsibility	Responsible for managing activities like planning, resourcing, processes, people, within broad parameters and with complete accountability for determining, achieving and evaluating personal and group outcomes.	Learners often work in specific domains, such as healthcare, finance, or marketing. This program allows students to specialize in their area of interest and gain domain-specific knowledge.	5

Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 30

S. No.	Tool / Equipment Name	Quantity for specified Batch size
1	Laptops	50

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Laptop
2. PPT Presentation
3. Internet with Wi-Fi (Min 2 Mbps Dedicated)

Annexure: Industry Validations Summary

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1	DAS BROTHERS	RIMSHI CHANDA	EA	PANIKHAITI, ASSAM	6000827989	sppllpacc@gmail.com	
2	Balaji Computers	Anil Harlalka	Proprietor	H. no. 11, Byelane No. 3, A.K. Azad Road, Rehabari, Guwahati – 781008, Assam	9435551855	Anil.harlalka@balajicomputersghy.com	
3.	ANZ OPERATIONS AND TECHNOLOGY	DEBANGSHU DEB	SOLUTION ENGINEER	BENGALURU	7676016882	Debangshu3187@gmail.com	
4.	Singhania Printing Press LLP	Rimshi Chanda	Executive Assistant	Byelane-7, Industrial area, Bamunimaidan, Guwahati, Assam, 781021	6000827989	sppllpacc@gmail.com	
5.	CAPGEMINI	SIBABRATA ROY	SENIOR PROJECT MANAGER	WHITEFIELD, BENGALURU, KARNATAKA- 560037	9886179729	Mail2sibabrata@gmail.com	

Annexure: Training & Employment Details (If there is any estimation from your end)

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
1	300	200	50	30	NA	
2	400	250	75	45	NA	
3	500	300	100	60	NA	

*Data to be provided year-wise for next 3 years***Training, Assessment, Certification, and Placement Data for previous versions of qualifications:**

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed

*Applicable for revised qualifications only, data to be provided year-wise for past 3 years.***List Schemes in which the previous version of Qualification was implemented:**

- 1.
- 2.

Content availability for previous versions of qualifications:
☐ Participant Handbook
 ☐ Facilitator Guide
 ☐ Digital Content
 ☐ Qualification Handbook
 ☐ Any Other:
Languages in which Content is available: English

Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer NCVET “Guidelines for Blended Learning for Vocational Education, Training & Skilling” available on:

<https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilling.pdf>

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline : Online Ratio
1	☒ Theory/ Lectures - Imparting theoretical and conceptual knowledge	Laptop/ Desktop/ White Board	1:2
2	☒ Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	Laptop/ Desktop/ White Board	1:2
3	☒ Showing Practical Demonstrations to the learners	Laptop/ Desktop/ White Board/Tools and equipment's	1:2
4	☒ Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	Laptop/ Desktop/Tools and Equipment's	1:2
5	☒ Tutorials/ Assignments/ Drill/ Practice	Laptop/ Desktop	1:2
6	☒ Proctored Monitoring/ Assessment/ Evaluation/ Examinations	Laptop/ Desktop	0:1
7	☒ On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	Laptop/ Desktop	0:1

Annexure: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Introduction to Data Science using Python (IITG/AIML01/NoS/N01)	PC 1: Understanding of Data Science Fundamentals	2	0	5	1
	PC 2: Basic Programming Skills	2	5	5	1
	PC 3: Proficient in manipulating and transforming data using programming languages such as Python or R, including tasks such as data cleaning, preprocessing, and feature engineering.	3	5	5	1

	PC4: Understanding of statistical concepts and methods commonly used in data science, such as hypothesis testing, regression analysis, and probability distributions.	3	5	5	2
	PC 6: Mastery in writing Python code fluently, including knowledge of Python syntax, data structures, control flow, functions, and object-oriented programming principles	2	2	5	1
	PC 7: Competence in using Python libraries such as Pandas, NumPy, and Matplotlib or Seaborn for data manipulation, analysis, and visualization, enabling exploration and interpretation of large datasets	2	3	5	1
	PC 8: Mastery of Python syntax, data types, control structures, functions, modules, and object-oriented programming (OOP) concepts, enabling efficient and effective coding.	3	5	5	1
	PC 9: Ability to deploy Python applications to production environments and follow best practices.	3	5	5	2
	Total marks	20	30	40	10
Mastering SQL and Visualization Tool – Tableau (IITG/AIML01/NoS/N02)	PC 1: Ability to write SQL queries to retrieve specific data from databases using SELECT statements, including filtering, sorting, and limiting results.	2	3	4	1
	PC 2: Ability to design and create relational database schemas using CREATE TABLE statements, defining primary keys, foreign keys, and constraints	2	3	4	1
	PC 3: Capability to perform basic data analysis tasks using SQL, including summarization, grouping, and filtering of data to derive insights	2	3	4	1
	PC 4: Capability to optimize SQL queries and database performance using techniques such as query optimization, indexing, and database tuning.	2	3	4	1
	PC 5: Knowledge of fault tolerance strategies, such as redundancy, failover mechanisms, circuit breakers, and graceful degradation, to build resilient systems that can withstand failures and recover gracefully.	2	3	4	1

	PC 6: Mastery of Tableau Desktop, including proficiency in navigating the user interface, connecting to various data sources, and building interactive visualizations and dashboards.	2	3	4	1
	PC 7: Ability to prepare and cleanse data for visualization in Tableau, including data cleaning, transformation, joining, blending, and aggregating data from multiple sources.	2	3	4	1
	PC 8: Proficiency in creating advanced visualizations in Tableau, including heat maps, tree maps, bubble charts, histograms, box plots, and other custom visualizations to represent complex data relationships and patterns effectively	2	3	4	1
	PC 9: Competence in designing and formatting interactive dashboards in Tableau, including layout design, formatting options, filters, parameters, and interactivity features to create intuitive and insightful dashboards	2	3	4	1
	PC 10: Proficiency in conducting exploratory data analysis and ad-hoc querying in Tableau, utilizing features such as data filters, calculated fields, table calculations, and trend lines to analyze and explore datasets	2	3	4	1
	Total marks	20	30	40	10
AI/ML: The Future is Now (IITG/AIML01/NoS/N03)	PC 1: Understanding of a wide range of machine learning algorithms, including supervised learning (e.g., linear regression, logistic regression, decision trees, random forests, support vector machines), unsupervised learning (e.g., k-means clustering, hierarchical clustering, principal component analysis), and reinforcement learning.	5	7.5	10	2.5
	PC 2: Understanding data preprocessing techniques, including data cleaning, imputation, normalization, scaling, and feature engineering, to prepare raw data for machine learning models effectively.	5	7.5	10	2.5
	PC 3: Ability to build linear regression models to establish relationships between continuous variables and predict numeric outcomes.	1	3	4	1

	PC 4: Skill in interpreting coefficients and assessing the significance of predictors in linear regression models to understand the impact of independent variables on the target variable. selection methods to identify the most relevant features for model training and prediction.	1	3	4	1
	PC 5: Capability to build logistic regression models for binary classification tasks, predicting the probability of a binary outcome.	2	3	4	1
	PC 6: Proficiency in evaluating logistic regression models using metrics such as accuracy, precision, recall, F1-score, and ROC-AUC curve.	2	2	3	0
	PC 7: Ability to build decision tree and random forest models for classification and regression tasks using tree-based algorithms.	2	2	3	1
	PC 8: Understanding of decision tree structures and feature importance in random forests for interpretability and feature selection.	2	2	2	1
	PC 9: Proficiency in implementing k-means and hierarchical clustering algorithms using programming languages and libraries such as Python (scikit-learn) or R.	1	2	3	0
	PC 10: Ability to select appropriate parameters for clustering algorithms, such as the number of clusters (k) in k-means or the linkage method in hierarchical clustering, through experimentation and validation.	1	2	3	0
	PC 11: Understanding of the differences between k-means and hierarchical clustering in terms of assumptions, scalability, and cluster shapes, and the ability to choose the appropriate algorithm based on the data characteristics and task requirements.	1	2	3	1
	PC 12: Proficiency in conducting cluster analysis to derive insights and actionable information from clustered data, such as identifying common	1	3	3	1

	patterns, outliers, or segmenting data for targeted marketing or customer segmentation.				
	PC 13: Proficiency in implementing PCA (Principal Component Analysis) and t-SNE (t-distributed Stochastic Neighbor Embedding) algorithms using programming languages and libraries such as Python (scikit-learn) or R.	2	2	3	1
	PC 14: Ability to select appropriate parameters for dimensionality reduction techniques, such as the number of components in PCA or the perplexity in t-SNE, through cross-validation and performance evaluation.	2	2	3	1
	PC 15: Skill in visualizing high-dimensional data in lower-dimensional space using PCA and t-SNE to identify patterns, clusters, and relationships between data points.	2	2	2	1
	PC 16: Achieve proficiency in understanding the concepts behind ensemble learning, including the principles of bagging and boosting, and their applications in improving model performance through aggregation of multiple base learners.	2	2	3	1
	PC 17: Develop skills in implementing bagging algorithms such as Random Forests, which involve training multiple decision trees on different subsets of the training data and aggregating their 2predictions to make robust and accurate predictions.	2	2	3	0.8
	PC 18: Achieve a deep understanding of the mathematical concepts behind support vector machines, including the margin maximization principle, kernel tricks, and the formulation of the optimization problem.	2	3	4	0.8
	PC 19: Gain proficiency in selecting appropriate kernel functions (e.g., linear, polynomial, radial basis function) and tuning kernel parameters to capture complex nonlinear relationships between input features and target variables.	1.4	3	3	0.8

	PC 20: Develop skills in using SVM for both binary and multiclass classification tasks, understanding the principles of one-vs-one and one-vs-all strategies for extending SVM to handle multiple classes.	1.3	2	3	0.8
	PC 21: Achieve a thorough understanding of neural network architectures, including feedforward neural networks, convolutional neural networks (CNNs), recurrent neural networks (RNNs), and deep learning fundamentals such as activation functions, loss functions, and optimization algorithms.	1.3	3	4	0.8
	Total Marks	40	60	80	20
Advanced NLP with Deep Learning and RL (IITG/AIML01/NoS/N04)	PC 1: Ability to preprocess raw text data by performing tasks such as tokenization, stop word removal, stemming or lemmatization, and handling special characters.	2	2	3	1
	PC 2: Proficiency in extracting relevant features from text data	2	2	3	0.8
	PC 3: Capability to analyze the sentiment expressed in textual data, including categorizing text as positive, negative, or neutral.	2	3	4	0.8
	PC 4: Mastery of techniques such as lexicon-based sentiment analysis, machine learning-based sentiment classification, and deep learning approaches using recurrent neural networks (RNNs) or transformers.	1.4	3	3	0.8
	PC 5: Proficiency in identifying and extracting named entities such as persons, organizations, locations, dates, and numerical entities from unstructured text data.	1.3	2	3	0.8
	PC 6: Ability to implement NER systems using techniques such as rule-based methods, conditional random fields (CRFs), or deep learning-based approaches like bidirectional LSTMs or transformer models.	1.3	3	4	0.8
	PC 7: Mastery of CNN architectures and their components such as convolutional layers, pooling layers, and fully connected layers.	2.5	1.5	3	1

	PC 8: Proficiency in designing and implementing CNNs for tasks such as image classification, object detection, and image segmentation.	1.25	1.5	3.5	1
	PC 9: Ability to fine-tune CNN architectures for specific image recognition tasks and optimize hyperparameters for improved performance.	1.25	1.5	3.5	0.6
	PC 10: Understanding of RNN architectures and variants such as Long Short-Term Memory (LSTM) networks and Gated Recurrent Units (GRUs).	1.25	1.5	2.5	0.6
	PC 11: Proficiency in using RNNs for sequential data modeling tasks including natural language processing (NLP), time series analysis, and speech recognition.				
	PC 12: Capability to handle challenges such as vanishing gradients and long-term dependencies in sequential data using advanced RNN architectures and optimization techniques.	1.25	3	2.5	0.6
	PC 13: Proficiency in transferring knowledge from pre-trained models to new tasks with limited data through techniques like feature extraction, fine-tuning, and domain adaptation.	1.25	3	2.5	0.6
	PC 14: Skills in fine-tuning hyperparameters and model architectures of pre-trained models to adapt them to specific use cases and improve performance on target tasks.	1.25	3	2.5	0.6
	PC 15: Mastery of the theoretical foundations of MDPs, including states, actions, transition probabilities, rewards, and the Markov property.	1	2	3	0.5
	PC 16: Ability to formulate real-world problems as MDPs and understand the implications of different MDP properties on the design of RL algorithms.	1.5	1.5	3	0.5
	PC 17: Capability to implement Q-learning algorithms to learn optimal action-value functions in discrete action spaces.	1.5	2.5	3	0.5

	PC 18: Understanding of the Q-learning update rule, exploration-exploitation trade-off, and convergence properties.	1.5	3	3	0.5
	PC 19: Ability to apply RL algorithms to solve a variety of real-world problems.	1.5	2	3	1
	PC 20: Proficiency in designing RL experiments to evaluate algorithm performance on different tasks and environments.	1.5	2	3	1
	PC 21: Ability to analyze experimental results and draw meaningful conclusions about the effectiveness and limitations of RL algorithms.	1.5	2	2	1
	Total Marks	30	45	60	15
Employability Skills (DGT/VSQ/N0102)		50	0	0	0
	Total Marks	50	0	0	0
Grand Total		160	165	220	50

Annexure: Assessment Strategy

Assessment strategy for a Data Science / AI ML course that covers SQL, Python, Tableau, and Introduction to AI/ML is crucial to ensure that students acquire the necessary knowledge and skills. Here's a comprehensive assessment strategy divided into four components: Theory, Practical, Viva, and Project.

1. Theory Assessment (160 Marks):

Objective: To evaluate students' theoretical knowledge and understanding of the course content.

Components: Final Exam (160 Marks): A comprehensive final written exam covering all course topics. It should include a mix of multiple-choice questions, short-answer questions, and essay questions to assess different levels of knowledge and critical thinking.

2. Practical Assessment (165 Marks): Objective: To assess students' ability to apply their knowledge to practical, real-world scenarios.

Components: Weekly Coding Assignments (65 Marks): Assign small coding tasks or exercises related to Python and SQL throughout the course. These assignments should progressively increase in complexity.

Tableau Data Visualization Project (100 Marks): Students must create a data visualization project using Tableau, demonstrating their ability to analyze data and present insights visually.

3. Viva Assessment (220 Marks):

Objective: To evaluate students' oral communication skills, deeper understanding of key concepts, and the ability to explain their work.

Components: Individual Viva (100 Marks): Conduct individual oral examinations where students discuss their projects, code, and concepts related to SQL, Python, Tableau, and AI/ML.

Group Discussion (120 Marks): Organize group discussions on current topics and trends in data science, AI/ML, and data analytics. This will assess students' ability to collaborate and engage in meaningful discussions.

4. Project Assessment (55 Marks):

Objective: To assess students' ability to work on a substantial Data Science / AI ML project from start to finish, including data collection, analysis, and model development.

Components: Project Proposal (10 Marks): Students must submit a detailed project proposal outlining their project's objectives, data sources, methodologies, and expected outcomes.

Project Progress (10 Marks): Periodic evaluations of students' project progress, including code reviews, data analysis, and intermediate results.

Final Project Presentation (20 Marks): Each student presents their project, explaining the problem, approach, results, and insights. The presentation should be followed by a Q&A session.

Project Report (15 Marks): A comprehensive project report that includes detailed documentation of the project, data analysis, code, results, and conclusions.

1. Assessment System Overview:

- Online assessment will be proctored by engaging a third party. The course access of this third party will be with IIT Guwahati and the participants.
- Offline assessment will be invigilator based. Final assessment will be offline in Test centers across India. Participants who will be doing the course in IIT Guwahati campus will be evaluated by course Instructor. For the participants joining through remote centres will be evaluated by sending external experts from IIT Guwahati.

- *Remote centres will be NIT's, Govt Colleges and Private colleges which has adequate resources and good internet connectivity.*
- *Software licences for this program will be provided by IIT Guwahati and also IIT Guwahati will provide a cloud-based utility setup to access these licences remotely (VPN).*
- *Certified Assessors will be deployed for executing the assessment.*

2. *Testing Environment:*

- *The assessment will have scenario based open book test and one-to-one online viva.*
- *Theory and Practical assessments will have to be completed in the specified time as given in Module Summary.*

3. *Assessment Quality Assurance levels/Framework:*

- *Question bank is created by the Trainers are again verified by the Master Trainer.*
- *Questions are mapped to all the different modules.*
- *The Assessors and Trainers have the required education and relevant experience in their field with ToA certified ToT Certified.*

4. *Types of evidence or evidence-gathering protocol:*

- *The online assessments will be saved in the cloud/drive and can be assessed whenever required.*

5. *Method of verification or validation:*

- *Monthly Feedbacks on various aspects of the course, including content clarity, instructional effectiveness, user interface, and overall satisfaction and analyze assessment results to evaluate whether learners are meeting the intended learning outcomes.*

6. *Method for assessment documentation, archiving, and access*

- *The online assessments will be saved in the cloud/drive and can be assessed whenever required.*

Justification of the nomenclature of the qualification

The nomenclature "Artificial Intelligence / Machine Learning Innovative Analyst" for a qualification is justified by the convergence of two significant technological domains: Artificial Intelligence and Machine Learning. Let's break down the justification step by step:

1. Relevance to Industry Trends

The course "AI/ML" (Artificial Intelligence and Machine Learning) is designed to address the rapidly evolving landscape of technology where AI and ML are becoming integral across various sectors. With the increasing adoption of AI/ML technologies in industries such as healthcare, finance, retail, and automotive, there is a growing demand for professionals skilled in these domains. The course prepares students to contribute effectively to innovative solutions and advancements in AI and ML applications.

2. Specialized Skillset

The "AI/ML" course equips students with a robust understanding and hands-on experience in:

- **Foundational Concepts:** Key principles of AI, machine learning algorithms, neural networks, and deep learning.
- **Programming Proficiency:** Mastery of programming languages commonly used in AI/ML.
- **Data Handling:** Techniques for data collection, preprocessing, and data augmentation.
- **Model Building:** Training, validating, and deploying machine learning models, including supervised and unsupervised learning.
- **Tools and Frameworks:** Familiarity with popular AI/ML libraries and frameworks like TensorFlow, PyTorch, and scikit-learn.

3. Data-Driven Decision-Making

The course emphasizes the significance of data in driving AI/ML solutions. Students will learn to:

- **Data Analysis:** Explore and visualize datasets to extract meaningful patterns and insights.
- **Model Evaluation:** Assess the performance of AI/ML models using appropriate metrics and validation techniques.
- **Real-World Applications:** Apply AI/ML techniques to solve practical problems in various industries, enhancing decision-making processes through predictive analytics and automation.

4. Technological Convergence

The "AI/ML" course acknowledges the convergence of multiple technologies and their collective impact on the AI/ML landscape. Students will explore:

- **Interdisciplinary Integration:** How AI/ML intersects with other technologies like IoT, blockchain, and cloud computing.
- **Ethical and Legal Considerations:** Understanding the ethical implications and regulatory frameworks governing AI/ML applications.
- **Scalability and Deployment:** Strategies for scaling AI/ML solutions and deploying them in real-world environments, considering factors such as computational resources and user accessibility.

5. Job Roles and Responsibilities

Graduates of the "AI/ML" course will be well-prepared for various roles, including:

- **Data Scientist:** Analyzing large datasets to build predictive models and derive actionable insights.
- **Machine Learning Engineer:** Designing and implementing machine learning algorithms and models.
- **AI Researcher:** Conducting research to advance the field of artificial intelligence and develop new AI technologies.
- **AI/ML Consultant:** Advising organizations on the adoption and implementation of AI/ML solutions to drive business value.

6. Emerging Industry Demand

As AI and ML continue to transform industries, the demand for skilled professionals in this field is escalating. The "AI/ML" course aligns with this demand by:

- **Industry Partnerships:** Collaborating with tech companies and research institutions to provide students with real-world exposure and internship opportunities.
- **Continuous Learning:** Encouraging lifelong learning and staying updated with the latest advancements and trends in AI/ML.

Summary

The "AI/ML" course is designed to provide students with a comprehensive education in artificial intelligence and machine learning, reflecting the industry's trends and needs. It emphasizes a specialized skillset, data-driven decision-making, technological convergence, and prepares students for various professional roles in this rapidly growing field.

Annexure: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf