AIML Developer-

Fundamentals

Contents

Course name: AIML Developer- Fundamentals

About the programme:

The AI/ML Developer Foundations programme is designed to equip learners with essential knowledge and skills in Artificial Intelligence and Machine Learning. Starting from Python programming and core mathematical concepts, the course progresses through supervised and unsupervised learning, optimisation techniques, and database integration. Learners will also gain hands-on experience with industry tools such as Google Colab and Kaggle, enabling them to build, test, and deploy AI/ML models.

Programme outcomes:

- Proficiency in Python programming for AI/ML applications
- Ability to work with scientific computing libraries for data analysis
- Understanding of linear algebra, random processes, and optimisation techniques
- Knowledge of databases and their integration with Python
- Skills in supervised and unsupervised machine learning methods
- Experience using platforms such as Colab and Kaggle for AI/ML development

Eligibility criteria:

- BTech/BE (all branches) – 5th semester onwards
- BCA/MCA – 3rd semester onwards
- BSc/MSc in Statistics, Mathematics, Physics, or Computer Science

Duration of the programme:

- **Hours:** 120 hours
- **Days:** 60
- **Months:** 5

Offline training centres:

NA

Course syllabus:

Module 1: Python Programming with Scientific Computing

- Python Fundamentals
- Scientific Python
- Databases with Python Clients
- Linear Algebra
- Random Process Optimisation Techniques
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Module 2: Core Concepts in Machine Learning

- Introduction to Machine Learning
- Supervised Learning
- Supervised Learning
- Non-Parametric Techniques
- Unsupervised Learning
- Dimensionality Reduction
- Ensemble Methods
- Reinforcement Learning

Module 3: AI/ML Project Development

- Project Planning & Dataset Preparation
- Model Development & Testing
- Deployment of AI/ML Models

Certification Process:

Course-completion certificates will be issued to participants who successfully complete all modules and assessments as per the guidelines set by ASAP Kerala.6