ed-watch
Your online resource partner

Live - Cohort

ADVANCED MACHINE LEARNING WITH PYTHON

Certificate on successful completion.

Starting 29th April 2024

35 Credit Hours

Three virtual classes each week

PROGRAM OVERVIEW

This program is specially designed for companies who want to improve their services and practices by enhancing their AI skills using Python. This is 6 to 8 weeks live program with one hour class three days a week. It consists of an assignment and quiz at end of each module.

At the end of the program you should be able to:

- Understand and perform coding using python
- Understand the concept of Machine Learning
- Perform complex calculations and data analysis
- Automate the process of building your data models

COURSE RESOURCE

- Power point slides for ready reference (hands outs)
- Raw Data files for training purposes
- Hand-on class projects with solutions
- Quizzes and Assignments
- Access to recorded lectures post-live class ON LMS.

WHO SHOULD ATTEND?

- Accountants and Finance Managers
- Data Analysts
- Data Science & Machine Learning Professional
- Programmers
- Risk Managers
- AI Enthusiasts
- Business Analysts

COURSE COVERAGE

Module A: Introduction & Calculation

- Lesson 1: Python Introduction
- Lesson 2: Variables and Data-types
- Lesson 3: User Input and Output
- Lesson 4: Using Python for calculations
- Lesson 5: Control Statements
- (a) Conditionals
- (b) Loops
- Project No. 1
- Quiz No. 1

Module B: Advanced Python

- Lesson 1: Functions
- Lesson 2: Local and global scope
- Lesson 3: Lists
- Lesson 4: Tuples
- Lesson 5: Dictionaries
- Project No. 2
- Quiz No. 2

Module C: Python Modules

Lesson 1: Introduction of Python Modules
Lesson 2: Matplotlib
Lesson 3: Seaborn
Lesson 4: Numpy
Lesson 5: Pandas
Practice for each module
Exercises
Project No. 3
Quiz No. 3

Module D: Machine Learning; Important Definitions and Concepts

- Lesson 1: Introduction to Machine learning
- Lesson 2: Types of Machine Learning
- Lesson 3: Basic understanding of Mathematics and Statistics formulas
- Lesson 4: Data Preprocessing and feature extraction
- Lesson 5: Training and Splitting
- Lesson 6: Model Training and Evaluation
- Lesson 7: Introduction to Regression
- Lesson 8: Simple Linear Regression and Multivariate Linear Regression
- Exercises
- Quiz No. 4

Module E: Classification, Logistics Regression, Decision Boundaries, and Performance Evaluation

- Lesson 1: Introduction to Classification
- Lesson 2: Binary and Multiclass Classification
- Lesson 3: Logistics Regression
- Lesson 4: Decision Boundaries, Loss/Cost Function, Gradient Descent
- Lesson 5: Classifier Performance Evaluation: Confusion Matrix Sensitivity, Specificity, Precision, Recall and F1-Score
- Project
- Quiz No. 5

Module F: Decision Tree, Unsupervised Learning, and Clustering

- Lesson 1: Introduction to Decision Tree
- Lesson 2: Building Decision Tree
- Lesson 3: Support Vector Machine (SVM) Overview
- Lesson 4: Introduction to Unsupervised Learning
- Lesson 5: Introduction to Clustering
- Lesson 6: K-Means Clustering
- Lesson 7: Overview of Reinforcement Learning
- Project
- Quiz No. 6

TRAINER'S PROFILE

AHMED GHAMAL

Machine Learning Expert | Applied Data Scientist

Ahmed Gamal is a dedicated Machine Learning engineer based in Cairo, Egypt, with a profound commitment to solving challenges through artificial intelligence. Possessing a background in Computer Science and a specialized focus on Machine Learning, he thrives on being challenged across diverse fields. His expertise encompasses Python programming, Natural Language Processing (NLP), PyTorch, and various Data Science frameworks. He is steadfast in leveraging AI to enhance people's lives. He is Machine Learning Lead at Udacity, He has remained in charge of projects for:

- Creating dashboard for sales for MEPS (The Middle East + Pakistan + Sri Lanka) region
- automating the generation of analytics reports using Airflow, Python, and Power BI.
- Creating a dashboard for mobile Application usage (UFS Sales Pro) that serves as a tracking tool for Unilever He is a Bachelors' in Computer Science and a Machine learning Engineer.

He implemented time series forecasting techniques for sales, automated analytics report generation using Airflow, Python, and Power BI, and created Power BI dashboards for intensive analytics. Ahmed has also contributed as a Freelancing Mentor at the Information Technology Institute (ITI), guiding alumni in launching freelancing careers, constructing professional profiles, and writing winning proposals.

PROGRAM DETAILS

- 2nd Batch is Starting 29 April 2024
- 35 Credit hours, 6 - 8 weeks long
- E-Learning – Live classes, 3 classes of 1 hour per week.
- 60% passing criterion.
- Quizzes & Assignments
- Recorded sessions available 24/7 on the LMS uploaded within 24 hours of the class.
- Online support during business hours is available.
- Weekly Progress report to HR where enrolled by Company.

Group discounts available

REGISTRATION & CONTACT DETAILS

Register Here

For more details or customization of training program contact:

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