Institute of Actuaries of India
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September 7th, 2021

ANNOUNCEMENT

PYTHON – THE PROGRAMMING LANGUAGE WEBINAR SERIES 2021

I. ABOUT THE PROGRAM

In 1998, a small company from California, with the help of the Python programming language, changed the way we search for relevant information on the Internet. The company had an unusual-sounding name: Google. Twelve years on, this name is valued at 111 billion US dollars, making it one of the most valuable brands in the world. It is safe to assume that without Python, the World Wide Web would not exist in its present form. Not only Google, but also many other companies and open-source communities have changed the web, and with it our lives, using **Python**.

Agility is the hallmark of our times and Python is the programming language of the agile era. The Python universal programming language is the turbocharger of the IT and Web systems. Compared with other modern programming languages such as Java or C, Python achieves superior results in significantly shorter timescales for a number of different reasons.

The objective of the **Basic** Part of the course is to provide a working knowledge about the Python programming language with some emphasis on manipulating numerical data sets. The Python modules like the NumPy, Pandas and Matplotlib modules will be introduced for handling large array objects and plotting. **Applications-Actuarial Domain** deals with Python in the domain of Actuaries.

Why Actuaries to master PYTHON language?

For over 20 years, Python has been used successfully throughout the world as a programming language in industry, in the service and financial sectors, and also in research and science to meet a wide range of different requirements. The Python programming language is easy to learn. It has blurred the boundaries between users and developers. Increasing numbers of scientists, engineers, financial experts and others with little programming experience are using Python to solve specific complex technical problems. At the time of Actuaries expanding their horizon to Data science and analytics, the Python makes a huge difference between those who "Know and do not Know"

Most of the employers looking for actuarial resources, irrespective of the class and category of employment prefers candidates who have knowledge of Python, R or SQL, hence the right time to become competent in the market.

II. PROGRAM SCHEDULE:

Webinars will start on **20th September, 2021** which will be spread over 34 days to be conducted in 16 sessions of 2 hours each duration. Participants are expected to work on their assignments on a regular basis to maintain the continuity of learning and practice. The program will include learning **Basics of Python** in 10 sessions along with 6 sessions of **Applications of Python in Actuarial Domain**

The program schedule is available in **ANNEXURE-I**

*Recorded videos of all webinars will be made available in the member's login page till **30th November, 2021**. However, it is highly recommended to attend all LIVE sessions without fail for optimum benefit out of the program.*

III. REGISTRATION:

- ✓ **Registration fee** : Rupees Six thousand **(₹6,000.00**) only (18% GST extra)
- ✓ **Registration menu** : Login to IAI >>>Class room coaching>>Registration
- ✓ **Registration opens** : On 7th September, 2021 6.00PM.
- ✓ **Registration closes** : On 18thSeptember, 2021 6.00PM.

IV. FACULTY

1. **Dr. B P Ajith Kumar**, M.Sc. & PhD (in nuclear physics) from University of Calicut and M.Sc. in Accelerator Physics, from University of Manitoba, is a retired scientist, Level H, from Inter University Accelerator Centre, New Delhi. He has been a regular invited speaker in various PyCon India (largest gathering of Pythonistas in India for Python programming language). He is also author of the book Python for Education published by Calicut University Press for Benefit of students.

2. **Mr. Ajay Shekhar** FIAI, is a fellow member of the Institute of Actuaries of India. He is currently Vice President at IDEAL Fastener & in-charge of India operations, where he uses python extensively to develop analytical frameworks in engineering, operations and for automated quality inspections using computer vision. Prior to IDEAL, he was with Ford Motor Company as a part of the Global Data Insights & Analytics team in US & India

V. COVERAGES:

1) Introduction to High level languages, Installation of Python Interpreter
2) Basic concepts like Variables, Data types and Operators
3) Control flow statements: conditional execution and iteration
4) Interactive Input, Formatted printing and File I/O
5) Functions, Modules and Packages: Importing Python modules
6) Classes and Objects, object oriented programming in Python
7) The NumPy module. Handling Array objects
8) Plotting with Matplotlib, data visualization.
9) The Pandas Module.
10) Data manipulation using Pandas.
11) Deployment in Python: Template Reporting, Desktop Applications & Web Servers
12) Handling Structured & Unstructured Data
13) Web Scraping in Python with Beautiful Soup & Selenium
14) Operational Risk Modelling in Python
15) Markov Chain Modelling in Python
16) Defined Contribution Simulation for Optimal Retirement Planning

VI. BENEFITS OF ATTENDING THE PROGRAM:

- ✓ To enter the magic world of Python Language
- ✓ To adopt Python for all data, research and analytics in the office work
- ✓ To take the first step towards mastering the current and future language of data scientists, IT and Web developers
- ✓ To become a freelance trainer for Python

- ✓ To interact with expert faculty
- ✓ To gain new job opportunities in the areas of data analytics and data science
- ✓ To gain unique skill in the current employment
- ✓ To utilise the best services by highly subsidised fees.

VII. CONTACT:

Point of contact for all related queries: Mr. Ravindra Mastekar at: ravindra@actuariesindia.org or 022 62433348

ANNEXURE-I

Program Schedule

Date	Day	Program	Topic
20th September	Monday	Basic	Introduction to High level languages, Installation of Python Interpreter
22nd September	Wednesday	Basic	Basic concepts like Variables, Data types and Operators
24th September	Friday	Basic	Control flow statements: conditional execution and iteration
27th September	Monday	Basic	Interactive Input, Formatted printing and File I/O
29th September	Wednesday	Basic	Functions, Modules and Packages: Importing Python modules
1st October	Friday	Basic	Classes and Objects, object oriented programming in Python
4th October	Monday	Basic	The NumPy module. Handling Array objects
6th October	Wednesday	Basic	Plotting with Matplotlib, data visualization.
8th October	Friday	Basic	The Pandas Module.
11th October	Monday	Basic	Data manipulation using Pandas.
13th October	Wednesday	Applications in Actuarial Domain	Deployment in Python: Template Reporting, Desktop Applications & Web Servers
15th October	Friday	Applications in Actuarial Domain	Handling Structured & Unstructured Data
16th October	Saturday	Applications in Actuarial Domain	Web Scraping in Python with Beautiful Soup & Selenium
17th October	Sunday	Applications in Actuarial Domain	Operational Risk Modelling in Python
22nd October	Friday	Applications in Actuarial Domain	Markov Chain Modelling in Python
23rd October	Saturday	Applications in Actuarial Domain	Defined Contribution Simulation for Optimal Retirement Planning