

PYTHON PROGRAMMING LANGUAGE: AN IDEAL CHOICE FOR BEGINNER PROGRAMMERS

Hamroev Bobirjon Bakriddinovich

Asia international University "General Technical" Sciences "Department teacher

Abstract: *Python is many in the fields applicable, high at the level intuitive and strong programming language. This Python programming in the article of the language to oneself its uniqueness, its development history and modern software supply in the field wide application about word Also, the information analysis, artificial intelligence, web programming and automation Python language in the fields how application shown.*

Key words: *Python, programming, artificial intelligence, information analytics, web programming, automation, machine learning learning, cross-platform.*

LOGIN

Python is a programming language created in 1991 by Guido van Rossum. working issued high level programming language. Today It is different every day. in the fields - web and mobile programs when creating, data analysis and scientific in computing, artificial intellect and car in learning wide Python's simplicity, strength libraries existence and open source him/her the most popular programming from their languages to one converted.

Python programming of the language historical development

Python programming language by Guido van Rossum in the 1980s working come out Python language started. first version introduced in 1991 done is, he is his simplicity and reading ease with famous Python 2.x was developed in the 2000s. issued there are many updates and features own inside Python 3.x was released in 2008. and today's on the day the most many being used is a version.

Python programming of the language features

Python is simple syntax and high reading level with separated It stands for programmers. code to write in acceleration help gives. In this case, the functions additional without writing call, arrays easily management, many libraries easily integration and use opportunity It also provides support for Python platform. related non- (cross-platform) feature has Linux, Windows and On macOS easily works.

Python application

Information analysis and scientific calculation

Like NumPy, Pandas, Matplotlib libraries Python information analysis and visualization for the most acceptable to the competition It turns. With this together with, SciPy, seaborn and StatsModels such as libraries scientific calculation and statistic analyses for wide opportunity creates.

Information analysis and scientific Python has its own way of calculating various libraries and tools with high at the level flexibility and efficiency provides. Below this libraries about wider information given:

1. NumPy

NumPy (Numerical Python) is scientific and calculation problems solution to do for used main from libraries It is one of the arrays . and matrices with to work facilitates and mathematician functions with to them fast processing to give provides .

Home possibilities :

Dimensions big was arrays fast and effective work

Many mathematician and statistic functions own inside takes , including trigonometric and algebraic actions .

Using NumPy arrays numbers , vectors and matrices with comfortable work opportunity gives .

Application Industry : Many dimensional information again work and scientific calculation for wide is applied .

2. Pandas

Pandas are information analysis to do and again work for comfortable library is different kind information structures management and again work opportunity Pandas basically gives two main structure - DataFrame (table) similar data) and Series (a dimensional data) with works .

Home possibilities :

Data reading and to write for wide extensive formats supports (CSV, Excel, SQL, JSON).

Filter , sort , group and aggregation to do such as analysis functions done increase

Data to time based analysis to do and again work

Application Industry : Financial analysis , social sciences and various in the fields big in size information management and analysis to do for wide is applied .

3. Matplotlib

Matplotlib is for Python graphic drawing library is different kind diagrams and graphs to create opportunity He gives research . and reports for necessary was visualization done in increasing is used .

Home possibilities :

Line , column , pie and other kind of graphs create

Picture , diagram and graphs personalization and them formatting .

2D and 3D graphics create opportunity .

Application Industry : Any scientific research and in analyses information visualization in doing wide used , especially statistic information understanding and analysis to do for .

4. SciPy

SciPy (Scientific Python) is scientific calculation Python library for is , algebra, optimization , integration , Fourier transform such as complicated mathematician functions to perform opportunity gives .

Home possibilities :

Algebraic and statistic analyses to do .

Alarm and the picture again work

Scientific modeling and optimization .

Application Field : Scientific research , engineering and technician calculation for important tool is considered .

5. Seaborn

Seaborn - Based on Matplotlib built visualization library is , statistically information visualization to do further makes it easier and aesthetic in terms of high good quality graphs to create opportunity gives .

Home possibilities :

Text and various statistics based on complex graphs create

With Matplotlib integrated without use ease .

Data grouping and statistics clear representative graphics create

Application Field : Statistics analysis and correlation show for very suitable.

6. StatsModels

StatsModels - statistician analysis and information modeling done increase for created library . U regression , ANOVA, time rows analysis to do such as statistic models to compose opportunity gives .

Home possibilities :

Statistical models , including regression , middle and variance analysis done increase

Model detection , testing and assessment for special functions .

Illuminated parameters explanation and the results performances .

Application Field : Economics , sociology , psychology and statistic research for wide is applied .

This libraries Using Python data analysis to do , visualization to do and scientific calculation for perfect platform as own instead of has These libraries will be not only software problems solution to do , maybe complicated information based on decision acceptance help in making gives .Artificial intellect and car study

Python's TensorFlow, Keras , PyTorch such as libraries car study models in creation wide is used . Today on the day artificial intellect field fast pace with developed , it has many new innovative Python is demanding solutions . artificial intellect in development place beautiful is considered .

Web programming

Like Django and Flask web frameworks using modern websites and APIs create Django can do it himself . strong security system and expandability with famous If , Flask will use its lightness and flexibility with known .

Automation

Python scripts with various systems automation , data again work and processes management This is possible . opportunities not only software supply , maybe other big in the fields too place holds .

Python technician advantages and restrictions

Python is simple and strong to syntax has happened because of new leaders It is an ideal choice for . interpretation to do opportunity there is is , code written immediately from the test transfer possible . With this together , Python many libraries and frames existence him/her many for purposes wide application opportunity creates . However, Python has some in cases slowly performance possible , especially severe requiring calculations programs for this and of the language from the shortcomings is one .

Future prospects

Python development continue is doing and his/her artificial intelligence , machine study , big in the fields of data (Big Data) wide application him/her future leader programming from their languages one become to stay hint does . From this except , quantum calculation and cloudy Python is the mainstay in technology from tools one as own instead of has .

Conclusion

Python programming language simple and convenience with programmers between wide widespread is , its opportunities day by day expanding Using Python created solutions and their various to the sectors influence , modern of technologies to develop huge contribution is adding .

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