Applications of python

Python is known for its general-purpose nature that makes it applicable in almost every domain of software development. Python makes its presence in every emerging field. It is the fastest-growing programming language and can develop any application.

**Here, we are specifying application areas where Python can be applied:**

1)WEB APPLICATIONS

We can use Python to develop web applications. One of Python web-framework named Django is used on **Instagram.** Python provides many useful frameworks.

2) DESKTOP GUI APPLICATIONS

The GUI stands for the Graphical User Interface, which provides a smooth interaction to any application. Python provides a **Tk GUI library** to develop a user interface.

3) SOFTWARE DEVELOPMENT

Python is useful for the software development process. It works as a support language and can be used to build control and management, testing, etc.

4) SCIENNTIFIC AND NUMERIC

Python language is the most suitable language for Artificial intelligence or machine learning. It consists of many scientific and mathematical libraries, which makes easy to solve complex calculations. Python has many libraries for scientific and numeric such as NumPy, Pandas, SciPy, Scikit-learn, etc.

5) BUSINESS APPLICATION

Business Applications are different than our normal applications covering domains such as e-commerce, ERP and many more. They require applications which are scalable, extensible and easily readable and Python provides us with all these features. Platforms such as Tryton is available to develop such business applications.

6)AUDIO OR VIDEO-BASED APPLICATION

Python is flexible to perform multiple tasks and can be used to create multimedia applications. Some multimedia applications which are made by using Python are **TimPlayer, cplay,** etc. Gstreamer, Pyglet, QT Phonon are few multimedia libraries.

7) (3D) CAD APPLICATION

The CAD (Computer-aided design) is used to design engineering related architecture. It is used to develop the 3D representation of a part of a system. Python can create a 3D CAD application by using the Fandango (Popular), CAMVOX, HeeksCNC, AnyCAD etc functionalities.

8) GAME DEVELOPMENT

Python is also used in the development of [interactive games](https://www.edureka.co/blog/python-turtle-module/). There are libraries such as PySoy which is a 3D game engine supporting Python 3, [PyGame](https://www.edureka.co/blog/pygame-tutorial) which provides functionality and a library for game development. Games such as Civilization-IV, Disney’s Toontown Online, Vega Strike etc. have been built using Python.

9) IMAGE PROCESSING APPLICATION

Python contains many libraries that are used to work with the image. The image can be manipulated according to our requirements. Some libraries of image processing are given below.

* OpenCV
* Pillow
* SimpleITK

WHY PYTHON IS BETTER THAN OTHER LAUNGAUGE?

**The python language is one of the most accessible programming languages available because it has simplified syntax and not complicated, which gives more emphasis on natural language. Due to its ease of learning and usage, python codes can be easily written and executed much faster than other programming languages.**

**Real-world application:**

At Rozum Robotics our mission is to create safe and easy to use collaborative robotic arms. We are striving to make robots that could be integrated into different workspaces and industries as quickly as possible.

The process of designing, implementing, and making Python API for the Pulse robotic arm public was our first successful experience. The simplicity of development and setup which, in basic cases, include installation of the interpreter, running one pip install command, and writing several lines of code to get access to the robot functionality, led to the intensive expansion of the language into the company’s processes and codebase. The motors API is written in C, so it was not a problem to wrap it with Python. And again, this tiny library and wide choice of open-source libraries helped us to build diverse infrastructure. For instance: various testing stands with auto-generated reports and automatic notification of the results, as well as research applications gave us a possibility to make our hardware and software even better.

**Source:**

[applications](https://www.javatpoint.com/python-applications)

**Technology GitHub**