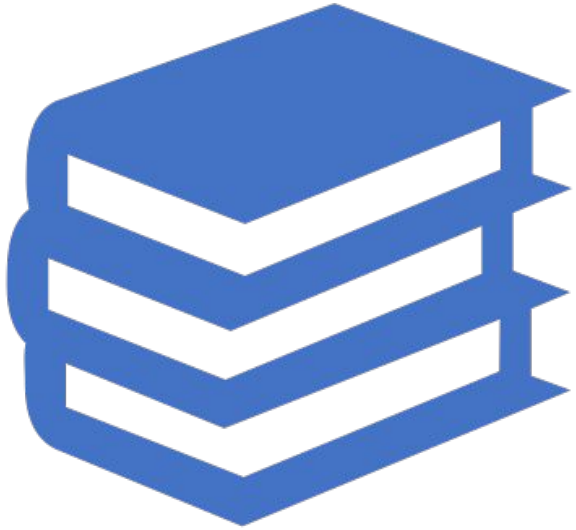


Python Best IDE

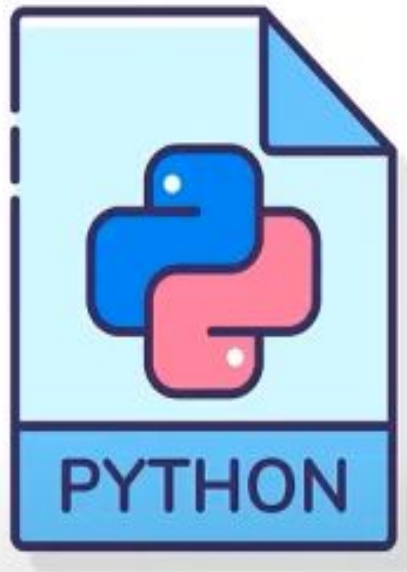
BEST PYTHON IDEs

AGENDA

What is an IDE?

Features of an IDE

Top Python IDEs



What is an IDE?

An IDE enables programmers to combine the different aspects of writing a computer program

IDEs increase programmer productivity by introducing features like editing source code, building executables, and debugging

Features of an IDE

Syntax Highlighting

```
// without syntax highlighting
public class Demo {
   public static void main(String[] args) {
   System.out.println(“Hello World!");
   }
}
```

Code without syntax highlighting

```
// with syntax highlighting
public class Demo {
   public static void main(String[] args) {
   System.out.println(“Hello World!");
   }
}
```

Code with syntax highlighting

Features of an IDE

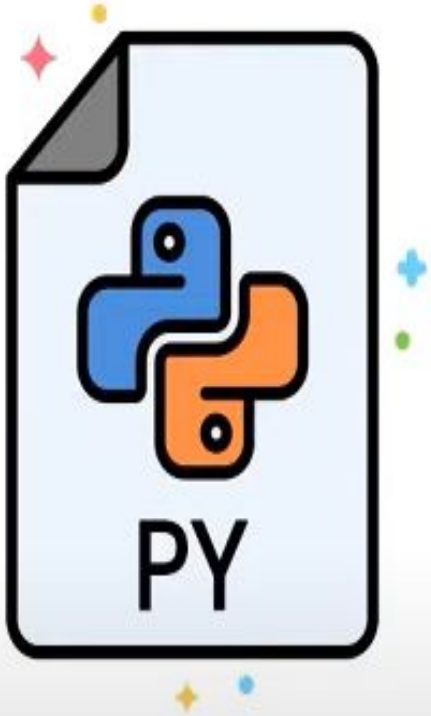
Autocomplete

IDEs are generally really good at anticipating what you're more likely to type next, which makes coding significantly faster and simpler

Features of an IDE

Building Executables

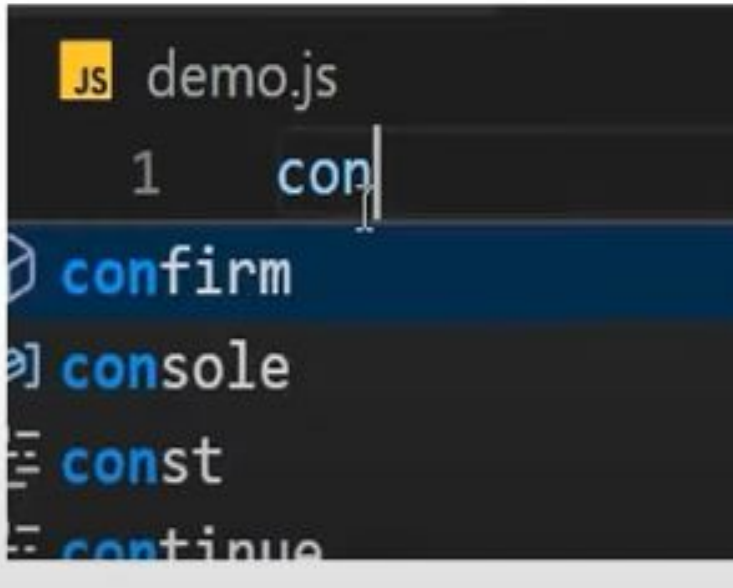
IDE takes care of interpreting the Python code, running python scripts, building executables, as well as debugging the applications



Features of an IDE

Debugging

When a program does not run correctly, IDEs provide debugging tools that allow programmers to detect the errors in their code



Top Python IDEs

Now that we know quite a bit about Integrated Development Environments, let's go ahead and look at a few popular Python IDEs

- Note that we won't be ranking these IDEs just for the sake of it, because we believe that different IDEs are meant for different purposes.
- But, we will surely discuss which IDE you should use according to your needs or requirements.
- This will help remove any doubts you have and make a choice that best suits your purpose.

IDLE

Price: Free

IDLE (Integrated Development and Learning Environment) is a default editor that comes with Python

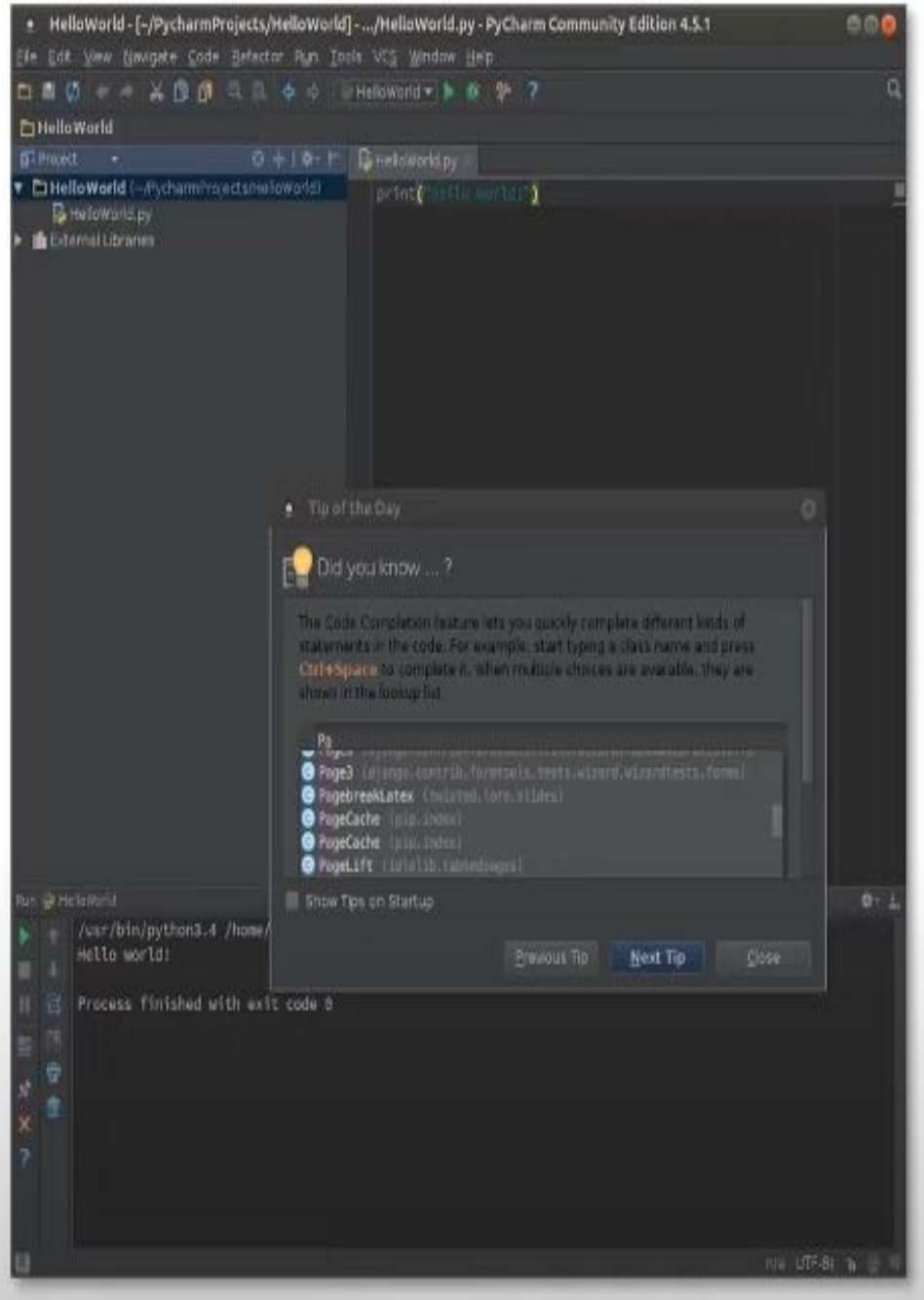
This IDE is suitable for beginner level developers

PyCharm

Price: Freemium

PyCharm is a widely used Python IDE created by JetBrains

This IDE is suitable for professional developers and facilitates development of large Python projects



PyCharm

Price: Freemium

Most notable features include:

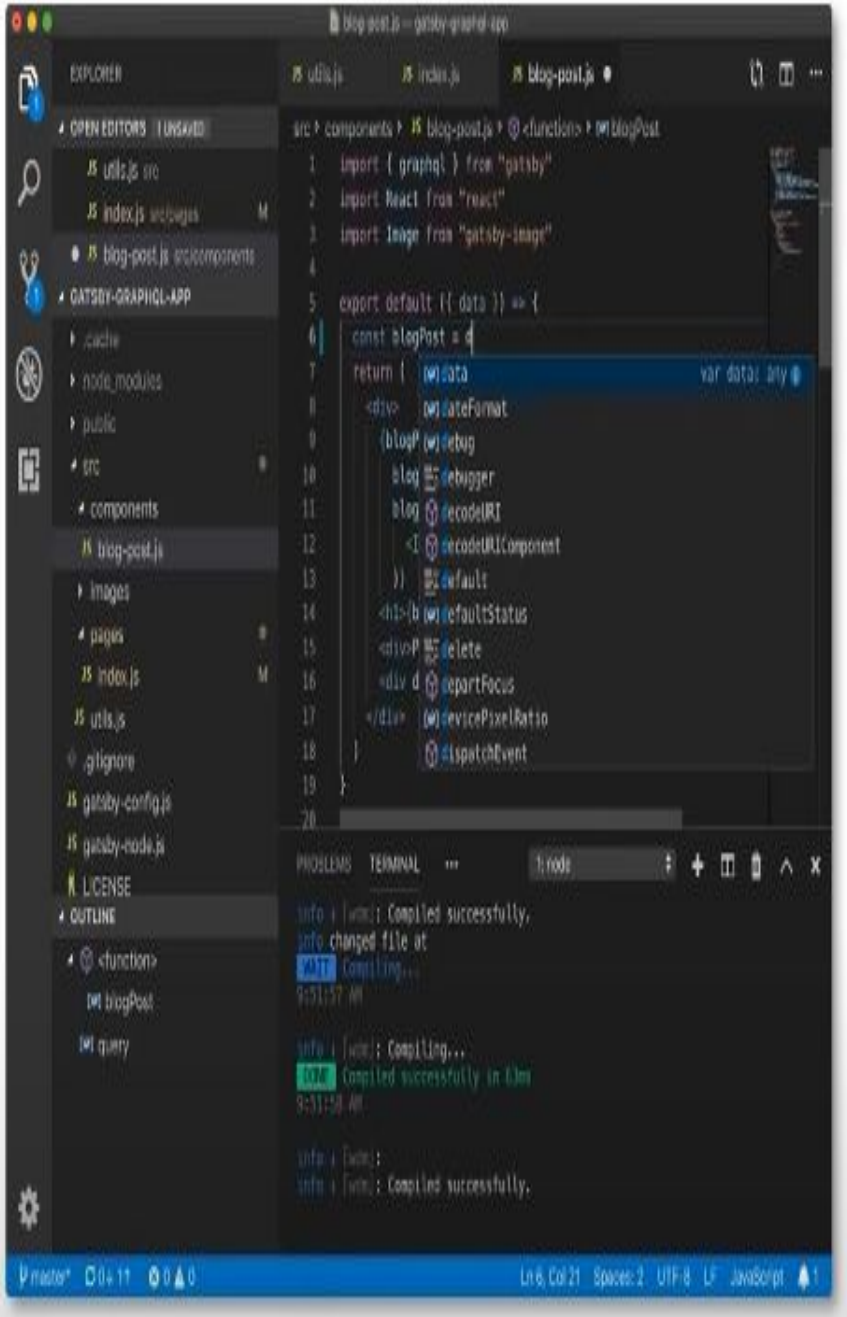
- Support for JavaScript, CSS, and TypeScript
- Smart Code Navigation
- Quick and safe code refactoring
- Supports features like accessing databases directly from the IDE

Visual Studio Code

Price: Free

Visual Studio Code is a free and open-source IDE created by Microsoft that can be used for Python development

VS Code is lightweight and packed with powerful features that only some of the paid IDEs offer

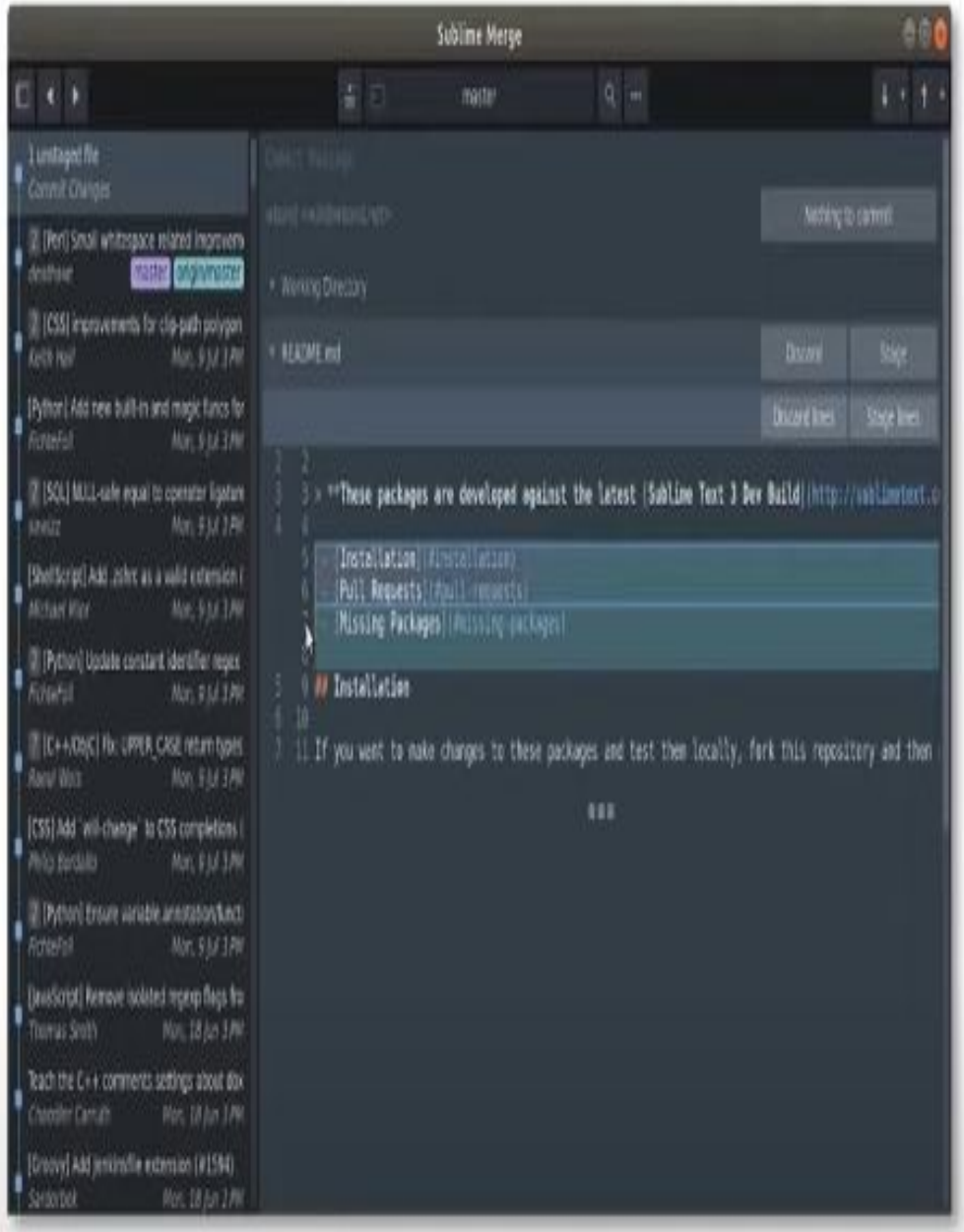


Sublime Text 3

Price: Free trial

Sublime Text is a popular code editor that supports many languages including Python

It is highly customizable and also offers fast development speeds and reliability



Atom

Price: Free

Atom is an open-source code editor developed by Github that supports Python development

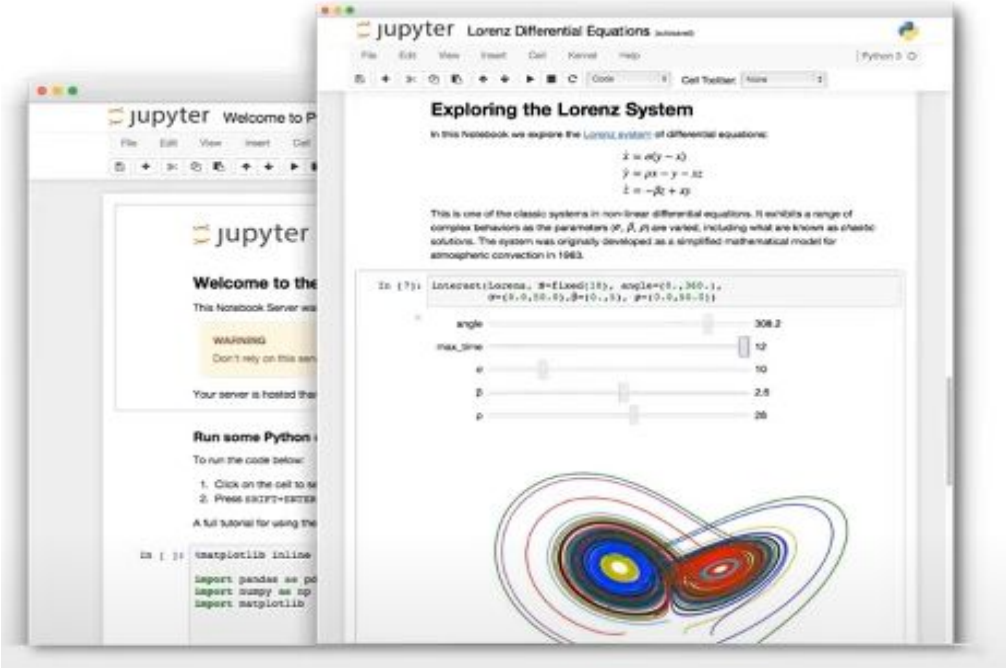
Atom is similar to Sublime Text and provides almost the same features emphasizing on speed and usability

Jupyter

Price: Free

Jupyter is widely used in the field of data science

It is easy to use, interactive and allows live code sharing and visualizations



Most notable features include:

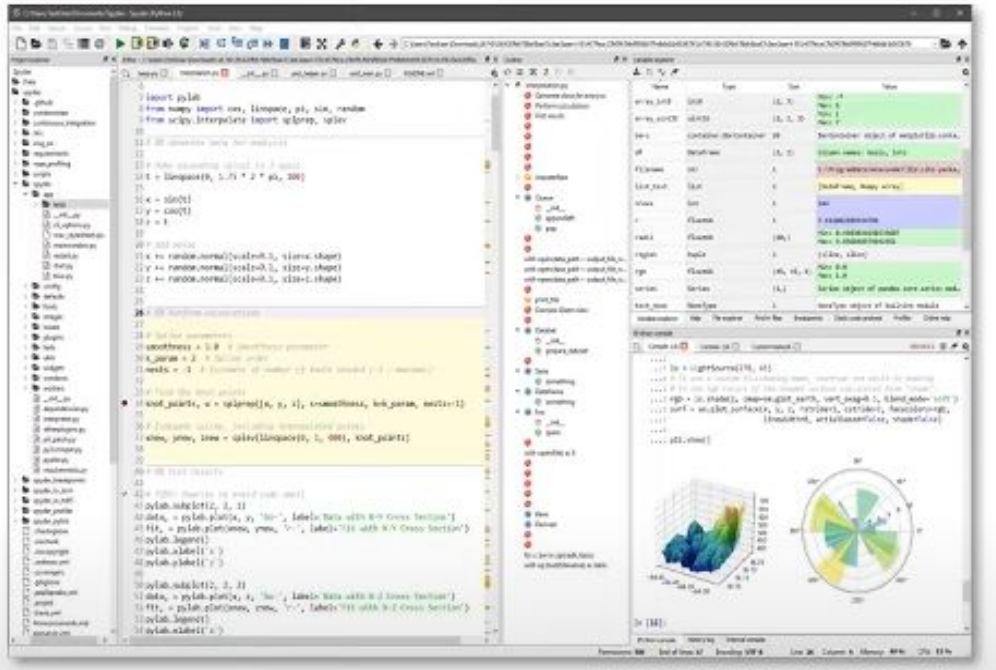
- Support for numerical calculations and machine learning workflow
- Combine code, text, and images for greater user experience
- Integration of data science libraries like NumPy, Pandas, and matplotlib

Spyder

Price: Free

Spyder is an open-source IDE usually used for scientific development

Spyder comes with Anaconda distribution which is popular for data science and machine learning



Most notable features include:

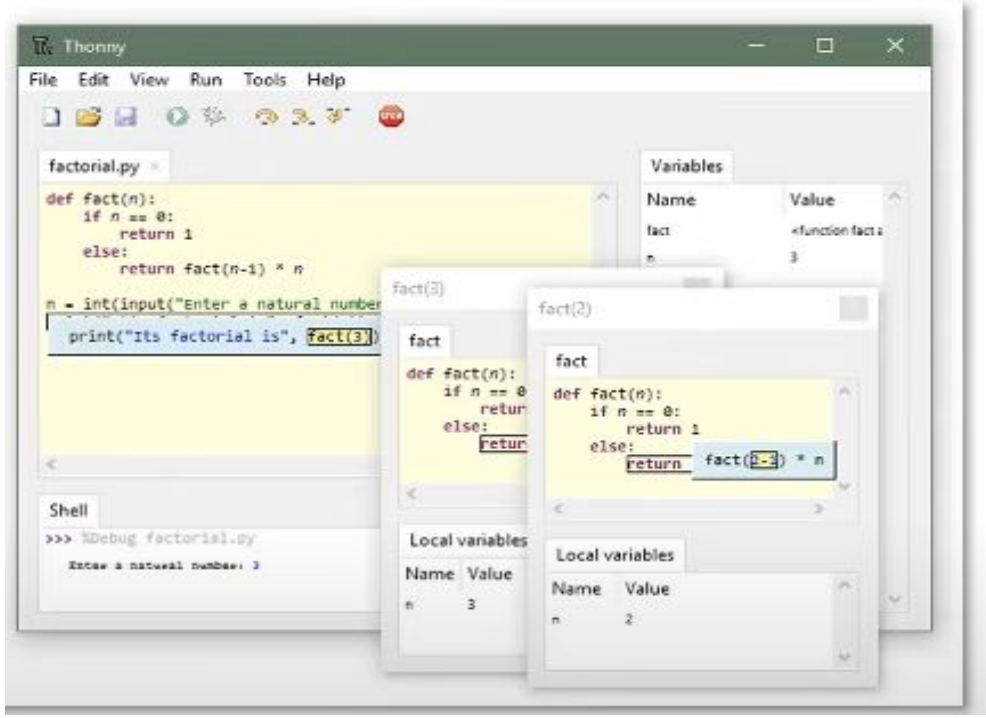
- Support for automatic code completion and splitting
- Supports plotting different types of charts and data manipulation
- Integration of data science libraries like NumPy, Pandas, and matplotlib

Thonny

Price: Free

Thonny is an IDE ideal for teaching and learning Python programming

Thonny is intended to be used by beginners and therefore sports a simple User Interface



Most notable features include:

- Simple debugger
- Function evaluation
- Automatic syntax error detection
- Detailed view of variables used in a Python program or project

Which IDE to use when?

What is your level?

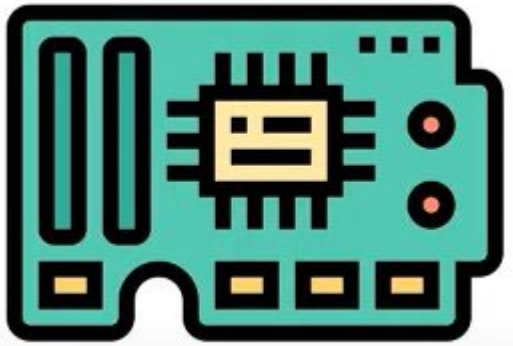
- **Beginner** – IDLE, Thonny would be the perfect choice for first-time programmers
- **Intermediate** – PyCharm, VS Code, Atom, Sublime Text 3

Which IDE to use when?

What is your end goal?

- **Data Science** – Spyder, Jupyter Notebook, PyCharm Professional (Paid)
- **Web Development** – VS Code, PyCharm Professional (Paid)
- **Scripting** – Atom, PyDev, Sublime Text 3, PyCharm Community (Free)

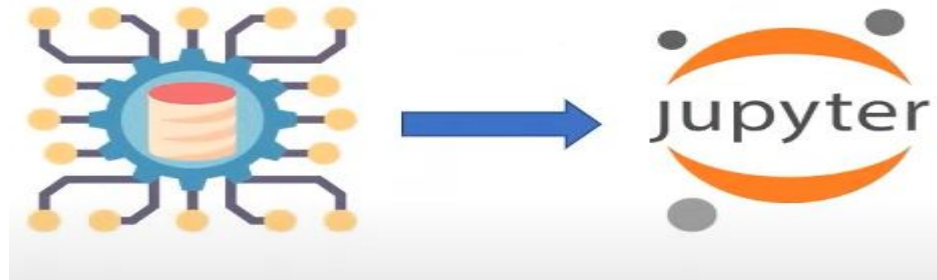
Which IDE to use when?



Which hardware do you have?

- **Basic (Pentium, Celeron)** – IDLE, Atom, Sublime Text 3, Online IDEs
- **Developer (Intel core series)** – PyCharm, Jupyter, Spyder, VS Code, Eclipse + PyDev

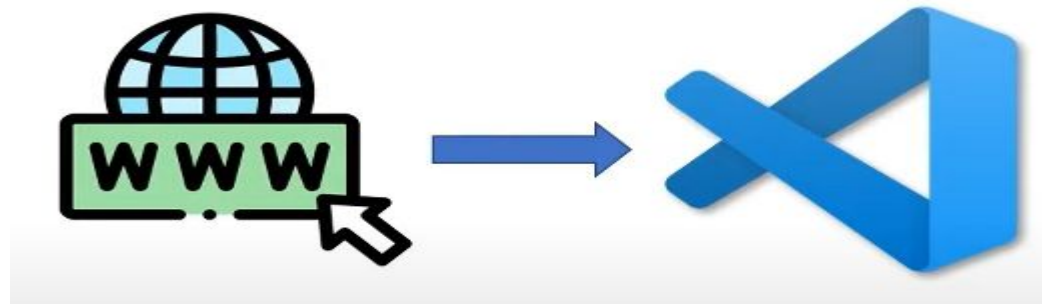
Which IDE do we recommend?



What is your purpose?

Data Science – Jupyter Notebook

Which IDE do we recommend?



What is your purpose?

Web Development – VS Code

Which IDE do we recommend?

What is your purpose?

Scripting – PyCharm Community (Free)