Fundamentals of Data science and Machine Learning

Concepts, Techniques and Tools to Build Intelligent Systems

Module 2
Beyond Normal Python:
Python For Data Science and Machine Learning

Ali Samanipour

May. 2023

1. Setup Your Development Environment
2. Pandas
3. NUMPY & MATPLOTLIB
4. SEABOARN
5. SCIPY
6. SCIKIT-LEARN

Development Environment Setup- Step 1

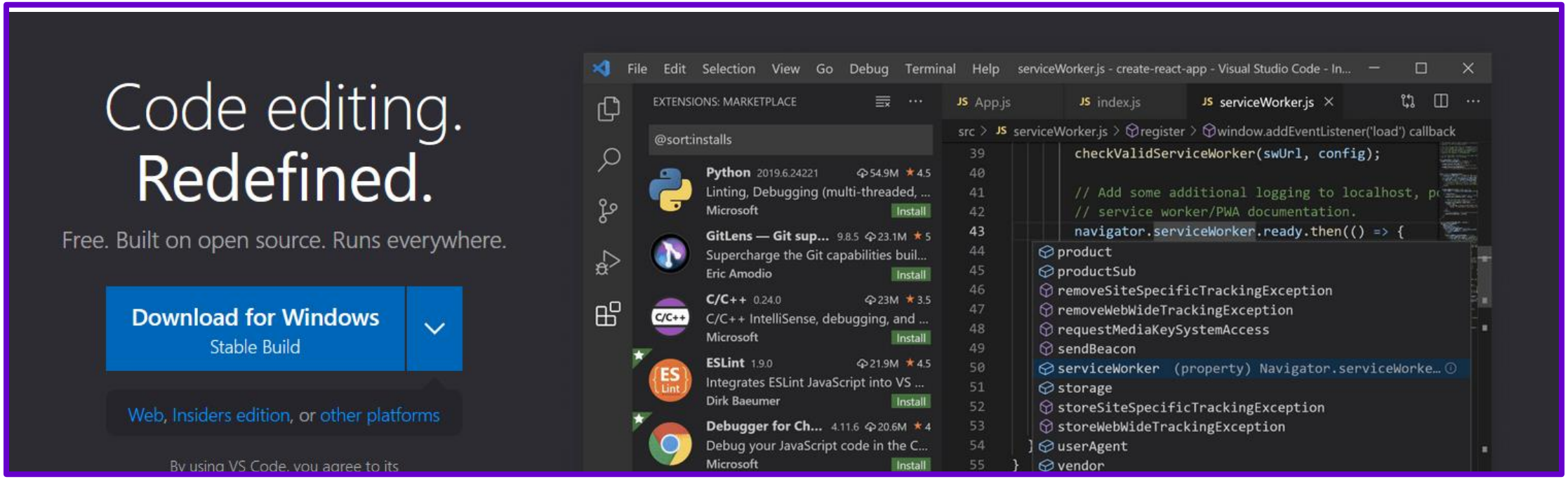
Download and install Python based on your OS.

https://www.python.org/downloads/

Development Environment Setup- Step 2

Download and install VSCode based on your OS.

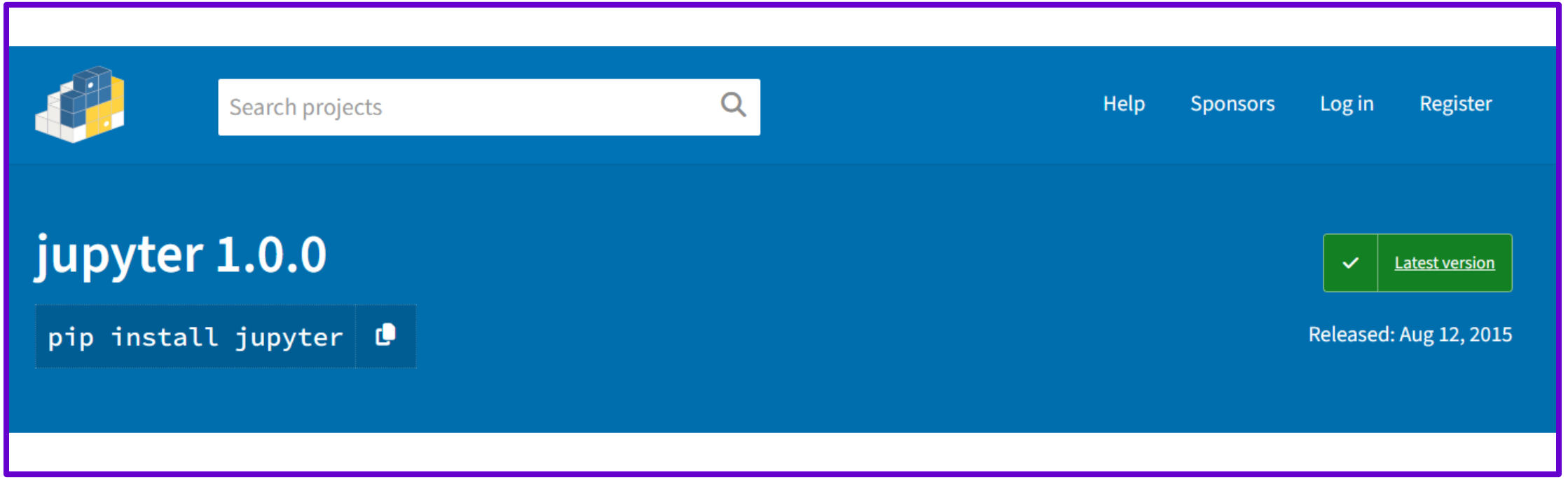
https://code.visualstudio.com/



Development Environment Setup- Step 3

Download and install Jupyter package.

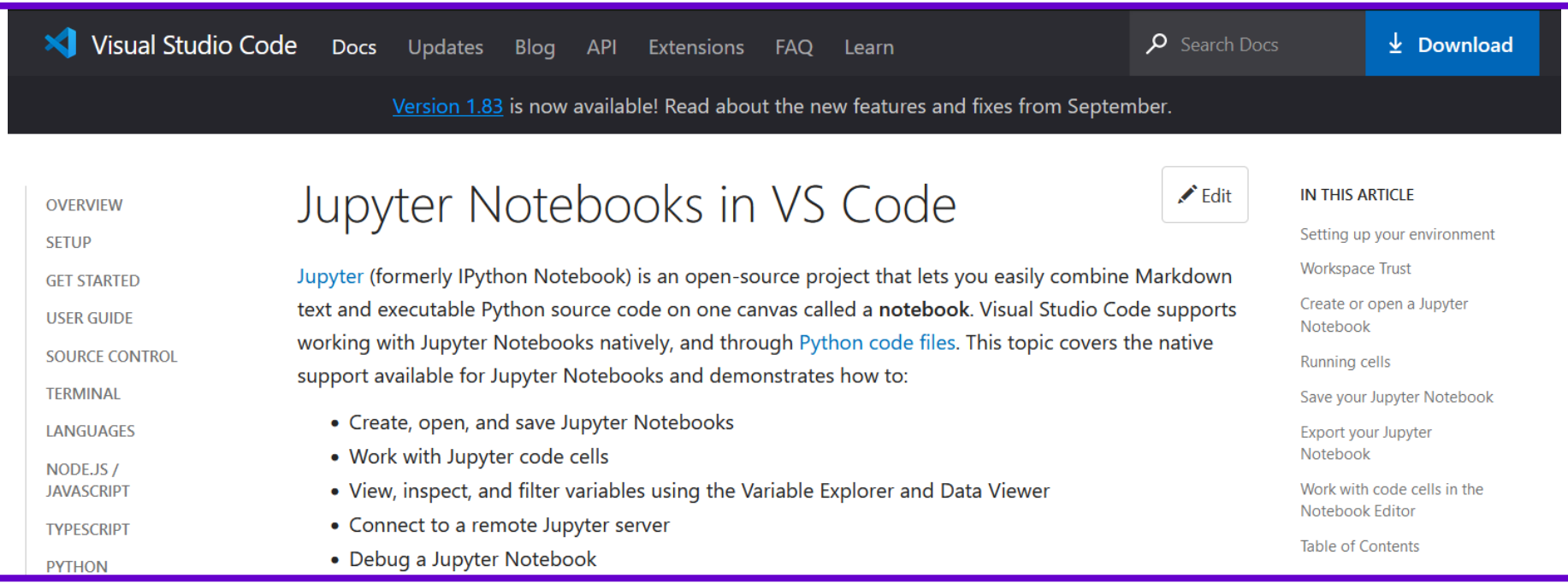
https://pypi.org/project/jupyter



Development Environment Setup- Step 4

Download and install Jupyter Extension on VSCode.

https://code.visualstudio.com/docs/datascience/jupyter-notebooks



Alternative Development Environments

You could use anaconda, Jupyter, Google Colab, etc.

1. Setup Your Development Environment
2. Pandas
3. NUMPY & MATPLOTLIB
4. SEABOARN
5. SCIPY
6. SCIKIT-LEARN

1. Setup Your Development Environment
2. Pandas
3. NUMPY & MATPLOTLIB
4. SEABOARN
5. SCIPY
6. SCIKIT-LEARN

1. Setup Your Development Environment
2. Pandas
3. NUMPY & MATPLOTLIB
4. SEABOARN
5. SCIPY
6. SCIKIT-LEARN

1. Setup Your Development Environment
2. Pandas
3. NUMPY & MATPLOTLIB
4. SEABOARN
5. SCIPY
6. SCIKIT-LEARN

1. Setup Your Development Environment
2. Pandas
3. NUMPY & MATPLOTLIB
4. SEABOARN
5. SCIPY
6. SCIKIT-LEARN

Course References

[1] S. J. Russell and P. Norvig, *Artificial Intelligence: A Modern Approach*. Pearson, 2021.

[2] T. Ghosh and S. K. B. Math, *Practical Mathematics for AI and Deep Learning: A Concise yet In-Depth Guide on Fundamentals of Computer Vision, NLP, Complex Deep Neural Networks and Machine Learning (English Edition)*. BPB Publications, 2022.

[3] M. P. Deisenroth, A. A. Faisal, and C. S. Ong, *Mathematics for Machine Learning*. Cambridge University Press, 2020.

[4] T. V. Geetha and S. Sendhilkumar, *Machine Learning: Concepts, Techniques and Applications*. CRC Press LLC, 2023.

[5] A. Géron, *Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow: Concepts, Tools, and Techniques to Build Intelligent Systems*. O'Reilly Media, 2023.

[6] O. Theobald, *Machine Learning for Absolute Beginners: A Plain English Introduction (Third Edition)*. Scatterplot Press, 2021.

Accessing Course Resource

linkedin.com/in/Samanipour

t.me/SamaniGroup

github.com/Samanipour