

# Machine Learning COS6026-B

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## 5<sup>th</sup> Week Lab Session: PCA in Python

**For this week we will implement the PCA tutorial in**

<https://www.datacamp.com/community/tutorials/principal-component-analysis-in-python>

If you are using PyCharm, you might need to install the following libraries:

- Keras
- TensorFlow
- seaborn
- matplotlib
- sklearn

To install any library in PyCharm go to:

File ➔ Settings ➔ Project Interpreter ➔ +

For TensorFlow, you might need to Download and install the Microsoft Visual C++ Redistributable for Visual Studio 2015, 2017 and 2019.

*x86: vc\_redist.x86.exe OR x64: vc\_redist.x64.exe*

<https://support.microsoft.com/en-us/topic/the-latest-supported-visual-c-downloads-2647da03-1eea-4433-9aff-95f26a218cc0>

### **Tasks**

Try working with the PCA.py code, which works for the CIFAR-10 database.

- Can you provide the plot for PC2 Vs PC3?
- Modify the code to work with the breast cancer dataset?