COURSE OVERVIEW & INSTALLATION

VISUAL LEARNERS

PYTORCH BASICS

CHAPTER ONE

1. SCALARS, ARRAYS AND MATRIX
2. RANK, AXES, AND SHAPE
3. CREATING TENSORS
4. TENSOR OPERATIONS
5. GRADIENTS
6. BACK PROPAGATION

PYTORCH BASICS

CHAPTER ONE

7 GRADIENT DESCENT (AUTOGRAD)

8 LINEAR REGRESSION

9 LOGISTIC REGRESSION

10 ACTIVATION FUNCTIONS

11 DATASET AND DATALOADER

12 DATA TRANSFORM

INSTALLATION PACKAGES

01

ANACONDA

02

JUPYTER NOTEBOOK

03

PYTORCH

04

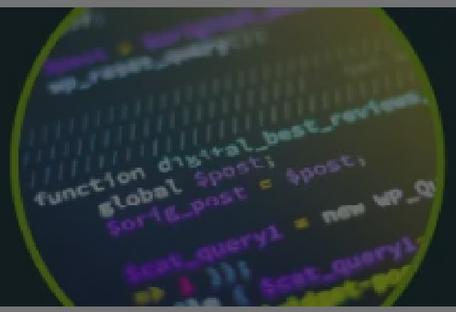
NUMPY

05

SKLEARN

06

MATPLOTLIB



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Anaconda offers the easiest way to [illegible] machine learning on a single machine. Start working with thousands of open-source packages and libraries today.

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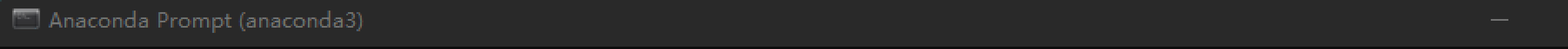
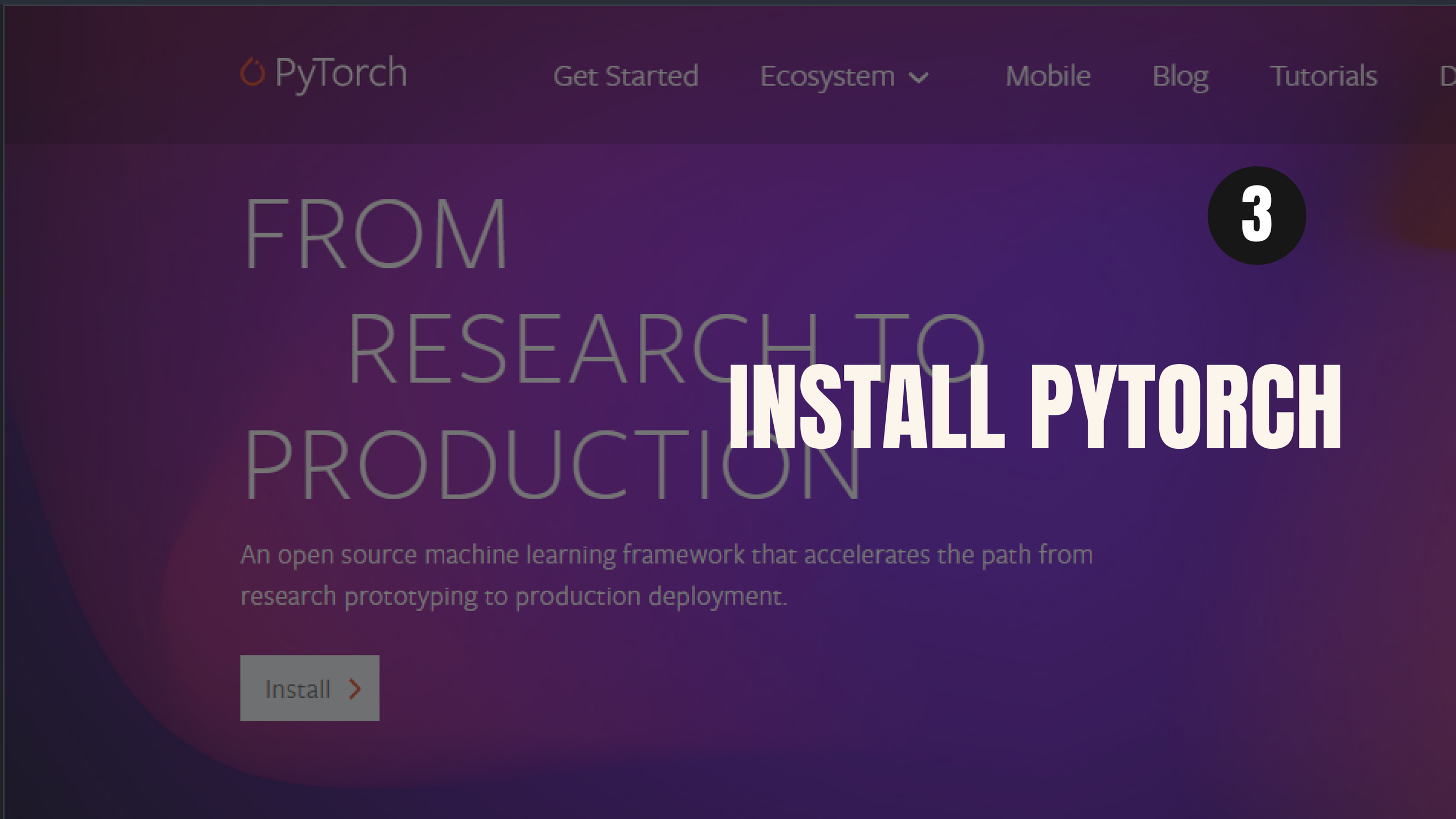
Get Additional Installers




```
(base) C:\Users\hp>conda create -n pytorchenv
```

2

SETTING UP ENVIRONMENT


PyTorch
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Ecosystem
Mobile
Blog
Tutorials
FROM
RESEARCH TO
PRODUCTION
An open source machine learning framework that accelerates the path from research prototyping to production deployment.
Install
3
INSTALL PYTORCH

INSTALL SKLEARN

4

scikit learn

Install User Guide API Examples Community More

scikit-learn

Machine Learning in Python

Getting Started | Release Highlights for 1.2 | GitHub

- Simple and efficient tools for predictive data analysis
- Accessible to everybody, and reusable in various contexts
- Built on NumPy, SciPy, and matplotlib
- Open source, commercially usable - BSD licens

Classification

Identifying which category an object belongs to.

Applications: Spam detection, image recognition.
Algorithms: SVM, nearest neighbors, random forest, and more...

Examples

Regression

Predicting a continuous-valued attribute associated with an object.

Applications: Drug res
Algorithms: SVR, near
and more...

Examples

Clustering

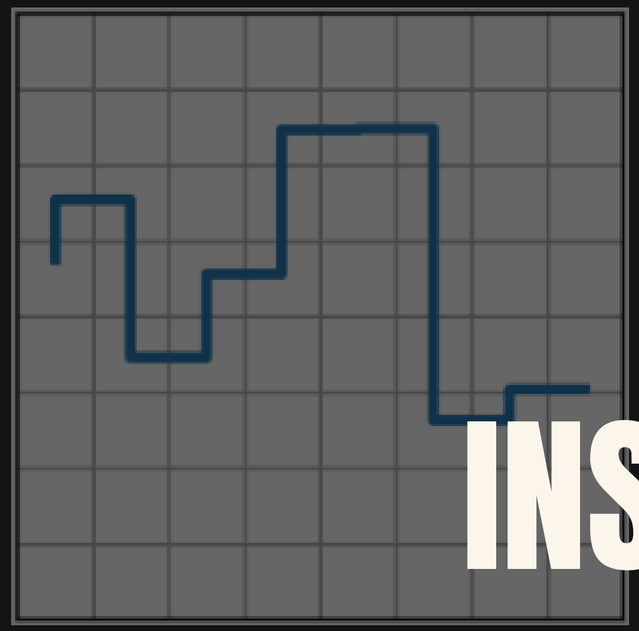
Automatic grouping of similar objects into sets.

Grouping
g, mean-shift, and more...

Examples

matplotlib

Plot types Examples Tutorials Reference User guide Develop Release notes



step(x, y)

5

INSTALL MATPLOTLIB

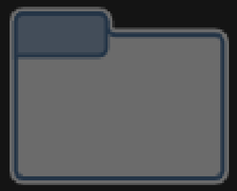
Matplotlib: Visualization wit

Matplotlib is a comprehensive library for creating static,
Matplotlib makes easy thin l hard things poss

- Create publication qua s.
- Make interactive figures that can zoom, pan, upda
- Customize visual style and layout.
- Export to many file formats.
- cal User Interface
- ckages built on M

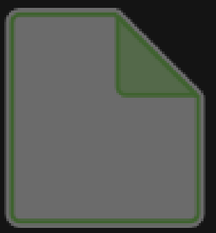
Try Matplotlib (on Binder) →

Getting Started



Examples

Reference



Cheat Sheets

jupyter Pytorch Basics Last Checkpoint: 18 hours ago (autosaved)

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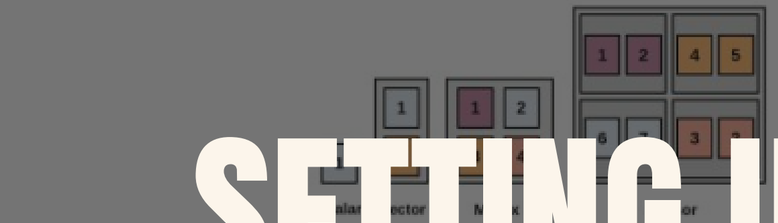
Not Trusted | deeplearningenv

Pytorch Basics

Section 1 - Scalars , Arrays and Matrix

6



SETTING UP JUPYTER

In [1]:
```
a = [1,2,3,4] # suppose we have this array
```

In [2]:
```
a[2] #accessing using single index
```

Out[2]: 3

In [3]:
```
 dd = [
[1,2,3],
[4,5,6],
[7,8,9]
] #suppose we have this 2d array
```

In [4]:
```
dd[0][2]#accessing using two indices zeroth row second column
```

Out[4]: 3

In [5]:
```
a = 10 #this is a scalar
```