Table of Contents

[Introduction 2](#_Toc14364698)

[Data structures 2](#_Toc14364699)

[Series 2](#_Toc14364700)

[DataFrame 2](#_Toc14364701)

[Panel 2](#_Toc14364702)

# Introduction

Pandas is used for data analysis. Pandas works on:

1. Series
2. Data frames

With Pandas you can load data in memory, do various calculations, aggregations, pivoting group by, transformation and manipulations on that.

Installed by pip install pandas

# Data structures

Pandas work on:

### Series

One dimensional array, size immutable, data mutable. Heterogenous data. Data of any type. Axis labels are collectively called index. Series can be created from Array, Dict or scalar values.

### DataFrame

Like a table. 2D array. Size mutable, value mutable. Data is in rows and columns.

### Panel

3-D array, mutable, heterogenous.

Dataframes are most important in pandas. You can practically compute any sort of statistical function or your own function on any data element of dataframe. You can even plot the data in graphs.