



Home Work

Data Science & Machine Learning

Data Analysis

NUMBER	DEADLINE	TOPICS
9	Monday, 1402/11/09 23:59:59 PM	Data Analysis, Pandas

۱. پاسخ تمرین را در کارپوشه خود، ارسال و پشتیبان فنی @Daneshkar_mentor را منشن کنید

۲. جواب سوالها را با فرمت ipynb در یک فایل فشرده تجمیع و ارسال کنید.

۳. در صورتی که سوال و یا ابهامی دارید در گروه چت تلگرامی بپرسید.

۴. لطفا نام فایل ارسالی خود را به صورت YourName_HW9 با نام خود قرار دهید

Penguin Data

Analysis	Score
1. read dataset	5
2. find out shape of data	5
3. dataset info	5
4. unique Species	10
5. find NaN values per columns	10
6. find culmen_depth_mm in each island	10
7. body mass in each sex	10
8. species in each island	10
9. share of female penguins in each species	15
10. flipper_length_mm comparisons between species (min, max, mean)	20

Additional Points:

10 Point for Markdown cells

30 Points for design and solve 3 more extra analysis on the dataset (Dependant on your own creativity)

Data description:

penguins_size.csv: Simplified data from original penguin data sets. Contains variables:

- **species:** penguin species (Chinstrap, Adelie, or Gentoo)
- **culmen_length_mm:** culmen length (mm)
- **culmen_depth_mm:** culmen depth (mm)
- **flipper_length_mm:** flipper length (mm)
- **body_mass_g:** body mass (g)
- **island:** island name (Dream, Torgersen, or Biscoe) in the Palmer Archipelago (Antractica)
- **sex:** penguin sex

What are culmen length & depth?

- the culmen is "the upper ridge of a bird's beak" (definition from Oxford Languages).

Side notes:

There are 17 penguin species on the planet, but the eight most iconic reside in Antractica, its nearby islands, and the sub-Antractic archipelagos of South Georgia and the Falklands.

Happy Analyzing 😊