Exercise

Given the file HR.csv with data on the survey of the level of satisfaction of employees with work.

The file is available here -
https://drive.google.com/file/d/1INgo03nal-vwFJe7Lec5vOUtOwfJdUr1/view?usp=sharing

Signs:

1. **satisfaction_level** - Job satisfaction level
2. **Last_evaluation** - Time since last evaluation in years
3. **number_projects** - The number of projects completed during the work
4. **average_monthly_hours** - The average number of hours at the workplace per month
5. **time_spend_company** - Length of service in the company in years
6. **work_accident** - Whether there were accidents in the workplace with an employee
7. **left** - whether the employee quit
8. **promotion_last_5years** - whether the employee has been promoted in the last five years
9. **department** - the department in which the employee works
10. **salary** - relative salary level

You need to complete the following task:

#	**Exercise**	**Points**
one	Load HR.csv file into pandas dataframe	5
2	Calculate Basic Statistics for Variables (mean, median, mode, min/max, mean deviation).	ten
3	Calculate and visualize the correlation matrix for quantitative variables. Determine the two most correlated and the two least correlated variables.	ten
four	Calculate how many employees work in each department.	5
5	Show the distribution of employees by salary.	5
6	Show the distribution of employees by salary in each department separately	5
7	Test the hypothesis that high-salaried employees spend more time at work than employees with low salary	ten
eight	Calculate the following indicators among those who quit and did not retired employees (individually):	ten

	• Percentage of employees with a promotion in the last 5 years • Average degree of satisfaction • Average number of projects	
9	Divide the data into test and training sets Build an LDA model that predicts whether an employee quit based on the available factors (except department and salary) Assess the quality of the model on the test set	twenty
10	Download jupyter notebook from solution on github and send link	5

Total - maximum 85 points

You must score at least 55 to qualify.