



ML Domain Task

Language to be used - Python

Problem 1

ACME Insurance Inc. offers affordable health insurance to thousands of customer all over the United States. As the lead data scientist at ACME, **you're tasked with creating an automated system to estimate the annual medical expenditure for new customers**, using information such as their age, sex, BMI, children, smoking habits and region of residence.

Estimates from your system will be used to determine the annual insurance premium (amount paid every month) offered to the customer. Due to regulatory requirements, you must be able to explain why your system outputs a certain prediction.

What's the lowest value of loss you are able to achieve?

Dataset link:

https://drive.google.com/file/d/1hczD_xlMlzTDUOqHBGtuYdE4SwhabRtF/view?usp=sharing

Problem 2

This case requires trainees to **develop a model for predicting fraudulent transactions for a financial company and use insights from the model to develop an actionable plan**. Data for the case is available in CSV format having more than 6000k rows and 10 columns.

Candidates can use whatever method they wish to develop their machine learning model. Following usual model development procedures, the model would be

estimated on the calibration data and tested on the validation data. This case requires both statistical analysis and creativity/judgment. We recommend you spend time on both fine-tuning and interpreting the results of your machine learning model.

Dataset link:

<https://drive.google.com/file/d/1Afrm6F7MTAGwW55HBZdnNaTjt2HXNkK3/view?usp=sharing>

After completion, upload the task on your github and fill the link in the below Google Form link.- <https://forms.gle/z9yLHeoxvaQUXNHb8>

Resources to refer if you want:

Youtube:

<https://www.youtube.com/playlist?list=PLZoTAELRMXVPBTrWtJkn3wWQxZkmTXGwest>

GeeksforGeeks - Machine Learning Tutorial - GeeksforGeeks

Deadline - 31st July,2024

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