DATA AND
ARTIFICIAL INTELLIGENCE

Capstone Session 4

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Python for Data Analysis

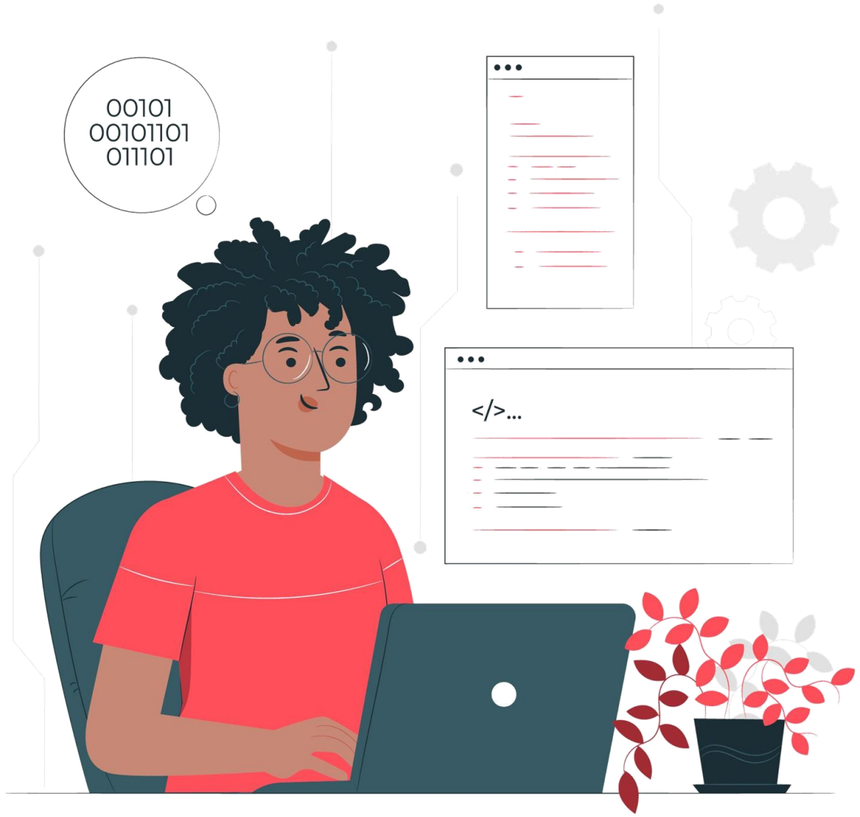
Python End Goal

Aura must be built to receive and process marketing campaign and user behavior data from various sources such as healthcare, technology and manufacturing domains.

- Aggregate data
- Shape data
- Understand the statistical analysis of data
- Normalize data

Project Statement

Build necessary data aggregation, wrangling and visualization modules for Aura using the Healthcare dataset.



Dataset Description

NSMES1988.csv

Variable	Description	Variable	Description
visits	Number of physician office visits	health	Factor indicating self-perceived health
nvisits	Number of non-physician office visits	chronic	Number of chronic conditions
ovisits	Number of physician hospital outpatient visits	adl	Factor indicating whether the individual has a condition that limits activities of daily living
novisits	Number of non-physician hospital outpatient visits	region	Factor indicating region
emergency	Emergency room visits	age	Age in years (divided by 10)

Dataset Description

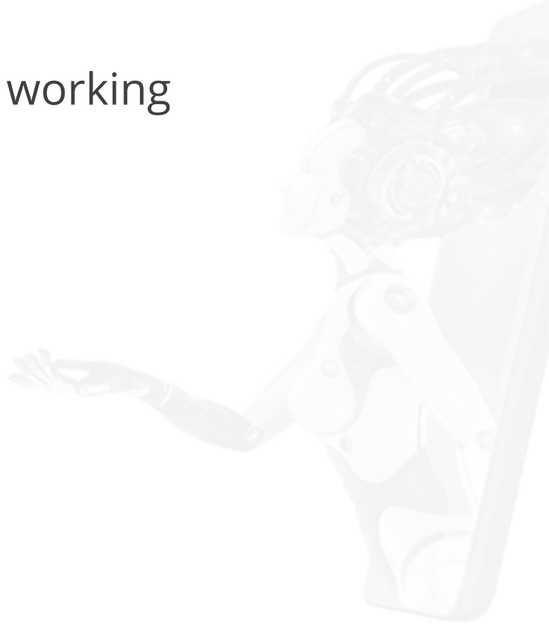
NSMES1988.csv

Variable	Description	Variable	Description
hospital	Number of hospital stays	afam	Factor. Is the individual African-American?
gender	Factor indicating gender	married	Factor. Is the individual married?
school	Number of years of education	income	Family income in USD 10000
employed	Factor. Is the individual employed?	insurance	Factor. Is the individual covered by private insurance?
medicaid	Factor. Is the individual covered by Medicaid?		

Week 4

Task: Visualize data

- Import relevant python libraries necessary for Python and Pandas analysis, as well as visualization
- Import the CSV file NSMES1988updated.csv file and create a new dataframe for working with Pandas
- Indicate the plotting library choice and reasons for the choice
- Plot the analysis done in Week 3 for the categorical data -Health and Region
- Plot the analyses done in Week 4 (analysis and correlation)
- Prepare a detailed report and record your observations.



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Thank You

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