

Course Project Overview

Description

In this individual project, you will create data visualizations to answer a **customer ask**. The project consists of a progress report, a final report, and a required checkpoint quiz.

Customer Ask

XYZ Corporation uses data to develop marketing profiles on people. These profiles are then sold to numerous companies for marketing purposes. You work at XYZ as a data analyst. You have just been given a new project working with UVW College, a local college looking to bolster enrollment. UVW has chosen a salary as a key demographic to determine criteria for marketing its degree programs. You must develop marketing profiles using data supplied by the United States Census Bureau, and you will be focusing on \$50,000 as a key number for salary. There are many key variables that must be assessed for individuals making less than and more than \$50,000, including age, gender, education status, marital status, occupation, etc.

For example, if the data show that the majority of individuals making less than \$50,000 is under 34 years old, male, single, and has a high school diploma, the college can market to this demographic with tuition amounts, program concentrations, and even ground or online programs appropriate to this demographic.

To achieve its enrollment target, the marketing team at UVW would like to develop an application to find the factors that determine the individual's income. One way to accomplish this is to use the United States Census Bureau data provided by the XYZ company. The marketing team wants to group the factors that can be used in the development of their proposed model/application. They also want the application to predict the income of an individual based on different values of the input parameters so that they can tailor their marketing efforts when reaching out to the individuals.

Project Dataset

You will use the following dataset to answer the customer ask:

Dataset (32,561 rows): <https://archive.ics.uci.edu/ml/machine-learning-databases/adult/adult.data>

Description of the column names:

<https://archive.ics.uci.edu/ml/machine-learning-databases/adult/adult.names>

Required Checkpoint: Project Preparation

It is recommended that you get an early start on the project. Review the customer ask and project overviews so you understand what the goal of the project is. Review the dataset and description of the attributes so you can familiarize yourself with the available data. You may even want to start cleaning the dataset (e.g., address "?" values).

- **Required Checkpoint: Project Preparation (5 questions):** Answer the questions in the Required Checkpoint quiz. The quiz is intended to help you begin preparing for your project. You will have unlimited attempts.

Course Project Progress Report

- **Progress Report (1.5-2 pages):** Write a report in which you summarize the progress you have made on the course project thus far.

Course Project Final Report

- **Final Report (4-6 pages):** Write a report that describes the work that has been done to answer the question posed by UVW. The audience for your report is the "team" who will be in charge of building and maintaining the application that the marketing department will use based on your findings. Your Python code will be included in the appendix.

Directions

Specific instructions for each project deliverable can be downloaded from the *Course Project Overview - Downloadable/Printable* page in the *Welcome and Start Here* section.

Please review the directions in advance so you can work effectively on the various project deliverables.

Submission Directions for Project Deliverables

You are given three (3) attempts to submit your best work. The number of attempts is given to anticipate any submission errors you may have in regards to properly submitting your best work within the deadline (e.g., accidentally submitting the wrong paper). It is not meant for you to receive two (2) rounds of feedback and then one (1) final submission. Only your most recent submission will be assessed.

Submit each project deliverable in the appropriate submission space, which is in the Graded Coursework section of the week the deliverable is due. The instructions for submitting deliverables can be reviewed in the

Course Project Overview - Downloadable/Printable page in the *Welcome and Start Here* section, or in the submission space for that deliverable.

Please review the submission directions in advance so you are prepared to submit project deliverables appropriately.

Evaluation

Specific evaluation criteria for each project deliverable can be reviewed in the *Course Project Overview - Downloadable/Printable* page in the *Welcome and Start Here* section, or in the submission space for that deliverable.

Please review the criteria of each project deliverable for how it will be graded.

Deliverables missing any part of the project will be graded based on what was submitted against the rubric criteria. Missing parts submitted after the deadline will **not** be graded.

Review the course syllabus for details regarding late penalties.

Rubric

Specific rubrics for each project deliverable can be reviewed in the *Course Project Overview - Downloadable/Printable* page in the *Welcome and Start Here* section, or in the submission space for that deliverable.

Rubrics communicate specific criteria for evaluation. Prior to starting any graded coursework, learners are expected to read through the rubrics so they know how they will be assessed. You are encouraged to self-assess your responses and make informed revisions before submitting your final deliverables. Engaging in this learning practice will support you in developing your best work.