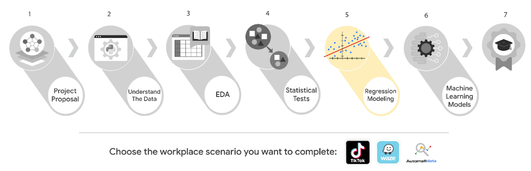
Explore your Course 5 workplace scenarios

Overview

This certificate offers you a choice of several different workplace scenarios to use when completing each end-of-course project:

- Automatidata, featuring a fictional data consulting firm
- TikTok, created in partnership with the short-form video hosting company
- Waze, created in partnership with the realtime driving directions app

Each scenario offers you an opportunity to apply your skills and create work samples to share when applying for jobs; so, you will be practicing similar skills regardless of the workplace scenario. It is recommended that you work with the same scenario for each end-of-course project to have a cohesive experience. However, you are welcome to investigate any of the workplace scenarios you are interested in as you progress through the program.



Reminder: *We recommend that you choose one workplace scenario to follow for all end-of-course projects to ensure end-to-end project development.*

The minimum requirement to earn your Advanced Data Analytics Certificate is to complete the end-of-course project, using one workplace scenario, for each course. You may complete the project for as many of the workplace scenarios as you wish. Completing the project for more than one workplace scenario in a single course offers you additional practice and work examples you can add to your portfolio and share with prospective employers during your job search.

This reading offers an overview of all available workplace scenarios. Before moving on, identify the scenario you would like to complete for the Course 5 end-of-course project.

Course 5 workplace scenarios

Automatidata

Project goal:

In this fictional scenario, the New York City Taxi and Limousine Commission (TLC) has approached the data consulting firm Automatidata to develop an app that enables TLC riders to estimate the taxi fares in advance of their ride.

Background:

Since 1971, TLC has been regulating and overseeing the licensing of New York City's taxi cabs, for-hire vehicles, commuter vans, and paratransit vehicles.

Scenario:

The relationship between fare amounts and payment type has been analyzed. The operations manager with New York City TLC is seeking more insight through regression modeling. The team's next milestone is to run a regression model for taxi fares based on variables in the dataset.

Course 5 tasks:

- Compute descriptive statistics
- Create a regression model from the New York City TLC dataset
- Create an executive summary for the Automatidata data team before sharing the results with the client

Note: *The story, all names, characters, and incidents portrayed in this project are fictitious. No identification with actual persons (living or deceased) is intended or should be inferred. And, the data shared in this project has been created for pedagogical purposes.*

TikTok

Project goal:

The TikTok data team is developing a machine learning model for classifying claims made in videos submitted to the platform.

Background:

TikTok is the leading destination for short-form mobile video. The platform is built to help imaginations thrive. TikTok's mission is to create a place for inclusive, joyful, and authentic content–where people can safely discover, create, and connect.

Scenario:

The data team at TikTok is close to their goal of building a model to assist in the classification of claims in videos. The next step is to use the project data to create a regression model. As a member of TikTok's data team, you'll determine the type of regression model that is needed and develop one using TikTok's claim classification data.

Course 5 tasks:

- Import relevant packages and TikTok data
- Exploratory data analysis and check model assumptions
- Determine the correct modeling approach
- Build the regression model
- Finish checking model assumptions
- Evaluate the model
- Interpret model results and summarize findings for cross-departmental stakeholders within TikTok

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Waze

Project goal:

Waze leadership has asked your data team to develop a machine learning model to predict user churn. Churn quantifies the number of users who have uninstalled the Waze app or stopped using the app. This project focuses on monthly user churn. An accurate model will help prevent churn, improve user retention, and grow Waze's business.

Background:

Waze's free navigation app makes it easier for drivers around the world to get to where they want to go. Waze's community of map editors, beta testers, translators, partners, and users helps make each drive better and safer.

Scenario:

Your team is more than halfway through their user churn project. Earlier you completed a project proposal, used Python to analyze and visualize Waze's user data, and conducted a hypothesis test. As a next step, leadership asks your team to build a regression model to predict user churn based on a variety of variables.

Course 5 tasks:

- Check model assumptions
- Build a binomial logistic regression model
- Evaluate the model
- Share an executive summary with the Waze leadership team

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Key Takeaways

In Course 5, Regression Analysis: Simplify Complex Data Relationships, you practiced modeling variable relationships, and investigated linear and logistic regression to better understand data modeling. Additionally, you reviewed model assumptions and evaluation techniques that will help you interpret and articulate relationships in datasets.

Course 5 skills:

- Conduct statistical analysis
- Conduct regression modeling
- Create predictive models
- Expand Python coding
- Share Insights and Ideas with stakeholders

Course 5 end-of-course project:

- Regression model within a Python notebook
- Executive summary with results of model and insights

The end-of-course portfolio projects are designed for you to apply your data analytical skills within a workplace scenario. No matter which scenario you work with, you will practice your ability to discuss data analytic topics with coworkers, internal team members, and external clients.

As a reminder, you are required to complete one project for each course. To gain additional practice, or to add more samples to your portfolio, you may complete as many of the scenarios as you wish.

Mark as completed