November 2022

Dear Candidate:

Thank you for your application. This file consists of two task assignments. These assignments consist of research skills assessments that will help us determine fit in our full-time RA program. These assessments are intended to test your ability to work independently, applied economic thinking, program, and find creative solutions to problems. If there are multiple approaches to a problem, state and justify your assumptions in your response and move on. **Please read the instructions for each assignment carefully before beginning your work.**

In addition to completing these tasks, please send along a brief writing sample. (If you do not already have one, please do not create one just for this application; instead let us know when submitting your evaluative assignment that you do not have a writing sample.)

We attach a timesheet that you should use to track the time you spend completing the evaluative assignment. Under the "Project" column, you should fill in either "Task 1" or "Task 2". Keep the Excel open and fill it in each time you start or stop working on the task. You can use a couple of shortcuts to make filling out the timesheet easier: `Ctrl+;` to enter the current date in a cell and `Ctrl+Shift+;` to enter the current time. Please include your timesheet in the submission.

We will invite you for a Zoom interview if we determine that you would be a good match for the position.

Please do not hesitate to contact us if you have any questions. The due date for the assignment is in the email you received.

Regards,

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Research Professional Recruiting Committee
Northwestern University
Kellogg School of Management
2211 Campus Drive
Evanston, IL 60208

Task 1: Red Sox Ticket Prices

Time: Spend no more than 8 hours on this task

Files: Red_Sox.zip

The .zip archive contains a comma-separated data file organized by year, containing a list of all StubHub ticket orders for the Boston Red Sox. The file includes information about the characteristics of the game (e.g., opponent, time-of-day, day-of-week, etc.) and other relevant order characteristics (e.g., number of tickets in order, etc.)

We'd like you to use these data to produce your best answer to the following questions:

** How do the prices consumers pay for tickets change as the game date approaches (i.e., as the number of days between transaction date and game date declines)? How does this dynamic pattern change across years?

We'd like you not only to decide what you think is the answer but also to prepare a document arguing for that based on the evidence.

You should feel free to use whatever techniques you want. The goal here is not to show off hi-tech econometrics, but rather to show us how you think about data. Sometimes something as simple as a graph can do more for an argument than all the estimators in the world.

Also, you need not take the structure of data as written in stone. If there are ways you'd like to transform the variables or restructure the data, please feel free. Think of this as a small research project: you have a dataset, and you need to find the best answer you can to a real-world question. You also need to justify it to an outsider (in this case, us!).

You are welcome to use whatever tool you like for this, including Python, R, Stata, Matlab, or another program.

Task 2: Data Manipulation

Time: No limit; complete as quickly as you can

Files: Medicare_Advantage.zip

The zip archive contains a document "Medicare Advantage Instructions.pdf" that describes the task in detail. You will need to take the data in scp-1205.csv and perform some simple manipulations. You are welcome to use whatever tool you like for this, including Python, R, Stata, Matlab, or another program. We are interested in knowing how quickly you can complete this task. You should therefore not look at Medicare Advantage Instructions.pdf until you are ready to start working on it, and you should record the time from when you first look at Medicare Advantage Instructions.pdf until you are finished. You should send us both the output data and the code that produced it.

When submitting your evaluative assignment, please state in your email how long you spent on Task 2, which you can determine from the timesheet you fill out.