

Week 9-Tutorial 6

Data extraction from SimplyMap and Web App Development

(Part a)

Part 1: Prepare System and Download Data

1. Log in to your lab computer.
2. Create a folder called **Labs**.
3. Create a folder called **Week9** within the **Labs** folder.

Create a folder called **Data**. Now you have a folder in the directory – **Week9**. We will keep all the data, related files and documentations in the **Data** folder and the Mxd files or PDF maps or image maps as a result of your class will be kept directly under **WeekX** folder in the future.

Data: Download the geodatabase from the blackboard under the **course materials** page. It is called **Week9lab6**. The data contains the following layers:

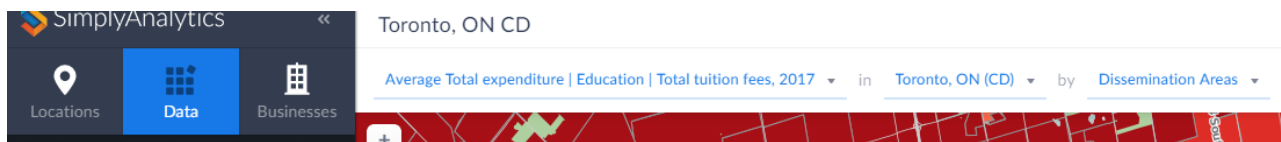
- a. Census Tract boundary (Toronto)
- b. City of Toronto boundary

We are going to look at the distribution of the **total average expenditure on tuition fees** by census tract in the City of Toronto. We will get the required data by Census Tract geographic units for the City of Toronto via SimplyMap. Once we map them in ArcMap, we will publish the map onto ArcGIS online. The map will then be converted into a web application. The application can be viewed once we publish it as a public domain.

Part 1 (data exploration and extraction using Analytics (a.k.a.SimplyMap)

1. Now we are going to extract data from SimplyMap. There are different ways to extract data, but we will use the following steps:
 - a. Log into the SimplyMap website using the credential provided to you in class.
 - b. Click on “New Project”
 - c. Type in “Toronto” and select “Toronto, ON (CD)”. Once you click ok, some common variables will be added for you.
 - d. Now look on the left panel where three tabs called location, data and businesses are located. Click on “data” tab and select “Household Spending CA”. Another panel on the right opens.

- e. Click on “Education” and “Average Total expenditure \ education \ tuition fees”.
- f. Close the variable panel by clicking X on the top right. Now you can see the map updated with auto-selected symbology with the *Average Total expenditure \ education \ tuition fees* . You can change the symbology if you want by clicking ‘edit’ on the legend, but it is not required.
- g. You will notice that right above the map, there is horizontal section where XXX in XXX by XXX is visible. You will notice that under “in” Toronto, ON (CD) appears. Next to it, under “by” Census Subdivisions are visible. There is a drop-down arrow next to “Census Subdivisions”. Click on it, and select “Dissemination Area”. The map changes now. It should look something like this:



- h. The legend on the side should look something like this (except for the colours you chose):



- i. We are going to export the data now. Click on “View Actions” menu located near top right corner of the map and select “Export Shapefiles”.

- j. A new window opens. Scroll down to verify that your right variable is selected. You don't want to select other variables (slows the process). It should look something like this:

The screenshot shows a web-based form titled "Export Shapefiles" with a close button (X) in the top right corner. The form is divided into four numbered sections:

- Select a Location:** A dropdown menu showing "Toronto, ON (CD)".
- Select a Geographic Unit:** A dropdown menu showing "Census Tracts".
- Append up to 10 data variables (1 selected):** A scrollable list of variables. The first variable, "by Educational Attainment | Household Population 25 To 64 Years | University Certificate, Diploma Or Degree At Bachelor Level Or Above, 2017", is unchecked. The second variable, "Average Total expenditure | Education | Total tuition fees, 2017", is checked with a blue box.
- Email to:** A text input field containing "k.paudel@utoronto.ca".

At the bottom of the form are two buttons: "Send" (in a dark blue box) and "Cancel" (in a light gray box).

- k. Click Send. It will take some time but an email will be sent to you with a link to download the data.

Question: what can SimplyAnalytics be used for (think about it for later)?

Download the shapefile you received via email, and join that data with the Census Tract data boundary you received as a part of **this tutorial (tutorial 6)** and start working on the ArcMap next.

Click on the link to download the data. The name will be very hard to remember, something like "SimplyMap_Shapefiles_date_xxxxxxx". Copy the file to your **data** folder, unzip it and give it a name called "Total_Average_TuitionExpenditure_Toronto_2017"

Fill out the participation form below:

<https://goo.gl/forms/cCtX3Tna9FXjC3lu2>