

World Population Data Analytics Using IBM Cognos

A PROJECT REPORT

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Data set: WPP2019_TotalPopulationBySex.csv

Links:

https://us1.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FWPP2019%2Bof%2Bdashboard&action=view&mode=dashboard&subView=model0000018123494b30_00000002

Upload Data

The screenshot shows the IBM Cognos Analytics with Watson interface. At the top, there's a navigation bar with tabs like 'My IBM', 'Home', and 'Recent'. Below the navigation bar is a 'Quick launch' section with four cards: 'Upload data', 'Prepare data', 'Exploration', and 'Present data'. Underneath this is a 'Recent' tab section. It displays several cards representing recent projects or dashboards, such as 'WPP2019_TotalPopulationBySex...', 'sales_Data Dashboard', 'sales_Data Exploration', and 'sales_DataPrep'. Each card includes a preview, last accessed date, and a CSV download icon.

The screenshot shows the 'New data module' view in IBM Cognos Analytics. On the left, there's a sidebar with a tree view of data modules, navigation paths, and the current selection, 'WPP2019_TotalPopulationBySex.csv'. The main area is a grid table with columns: Row Id, LocID, Location, VarID, Variant, and Time. The data shows rows of information for Afghanistan, primarily with LocID 4 and VarID 2. The grid has a header row and approximately 15 data rows.

Row Id	LocID	Location	VarID	Variant	Time
1	4	Afghanistan	2	Medium	1950
2	4	Afghanistan	2	Medium	1951
3	4	Afghanistan	2	Medium	1952
4	4	Afghanistan	2	Medium	1953
5	4	Afghanistan	2	Medium	1954
6	4	Afghanistan	2	Medium	1955
7	4	Afghanistan	2	Medium	1956
8	4	Afghanistan	2	Medium	1957
9	4	Afghanistan	2	Medium	1958
10	4	Afghanistan	2	Medium	1959
11	4	Afghanistan	2	Medium	1960
12	4	Afghanistan	2	Medium	1961
13	4	Afghanistan	2	Medium	1962
14	4	Afghanistan	2	Medium	1963
15	4	Afghanistan	2	Medium	1964

Prepare The Datasets

- Remove the existing column Pop total.
- Create A New Calculated Field **Pop Total = Pop Male + Pop Female** and Format the data.
- Format Pop Male and Pop Female field Data types.

Pop Total:

	Pop_total	Row Id	LocID	Location	VarID	Variant
	7752.117	1	4	Afghanistan	2	Medium
	7840.151	2	4	Afghanistan	2	Medium
	7935.995999999999	3	4	Afghanistan	2	Medium
	8039.684	4	4	Afghanistan	2	Medium
	8151.316000000001	5	4	Afghanistan	2	Medium
	8270.992	6	4	Afghanistan	2	Medium
	8398.873	7	4	Afghanistan	2	Medium
	8535.157	8	4	Afghanistan	2	Medium
	8680.097	9	4	Afghanistan	2	Medium
	8833.947	10	4	Afghanistan	2	Medium
	8996.967	11	4	Afghanistan	2	Medium
	9169.405999999999	12	4	Afghanistan	2	Medium
	9351.442	13	4	Afghanistan	2	Medium
	9543.2	14	4	Afghanistan	2	Medium
	9744.772	15	4	Afghanistan	2	Medium
	9944.210	**	*	Afghanistan	2	Medium

	ant	Time	MidPeriod	PopMale	PopFemale	PopDensity
	ium	1963	1963.5	4907.03	4636.17	14.618
	ium	1964	1964.5	5003.245	4741.527	14.926
	ium	1965	1965.5	5104.765	4851.553	15.25
	ium	1966	1966.5	5210.122	4964.718	15.585
	ium	1967	1967.5	5319.123	5080.813	15.93
	ium	1968	1968.5	5434.458	5202.606	16.293
	ium	1969	1969.5	5559.836	5333.936	16.686
	ium	1970	1970.5	5697.024	5476.63	17.115
	ium	1971	1971.5	5845.351	5630.099	17.577
	ium	1972	1972.5	6000.895	5790.327	18.061
	ium	1973	1973.5	6157.843	5951.12	18.548
	ium	1974	1974.5	6308.583	6104.377	19.013
	ium	1975	1975.5	6446.273	6242.891	19.436
	ium	1976	1976.5	6573.732	6369.361	19.825
	ium	1977	1977.5	6689.144	6482.15	20.175

Format Pop Male and Pop Female field Data types.

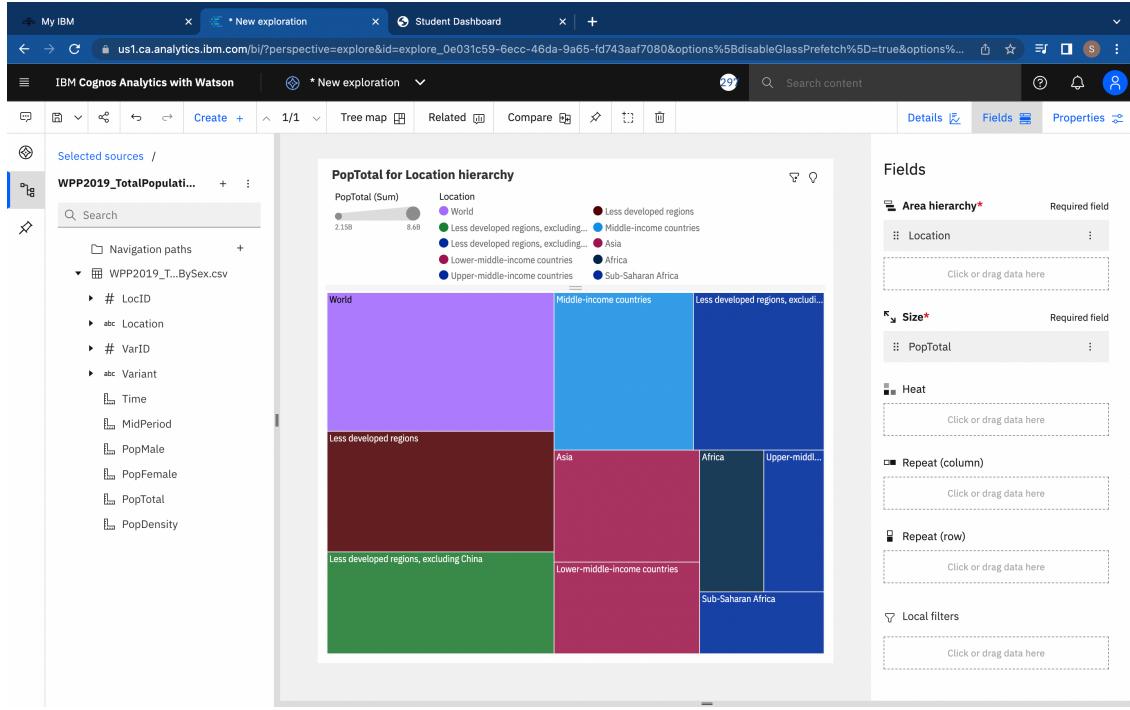
The screenshot shows the IBM Cognos Analytics with Watson interface. On the left, there's a sidebar titled "Data module" with a search bar and a tree view of data sources. The tree view includes "New data module", "Navigation paths", "WPP2019_T...BySex.csv", and several leaf nodes like "# Row Id", "# LocID", "# VarID", "# Variant", "Time", "MidPeriod", "PopMale", "PopFemale", "PopTotal", and "PopDensity". The "PopMale" node is currently selected, indicated by a blue border around its row in the grid. The main area is a data grid with the following columns: Location, VarID, Variant, Time, MidPeriod, and PopMale. The data shows population values for Afghanistan from 1950 to 1964. The "PopMale" column is highlighted with a blue border.

Location	VarID	Variant	Time	MidPeriod	PopMale
Afghanistan	2	Medium	1950	1950.5	4,099.243
Afghanistan	2	Medium	1951	1951.5	4,134.756
Afghanistan	2	Medium	1952	1952.5	4,174.45
Afghanistan	2	Medium	1953	1953.5	4,218.336
Afghanistan	2	Medium	1954	1954.5	4,266.484
Afghanistan	2	Medium	1955	1955.5	4,318.945
Afghanistan	2	Medium	1956	1956.5	4,375.8
Afghanistan	2	Medium	1957	1957.5	4,437.157
Afghanistan	2	Medium	1958	1958.5	4,503.156
Afghanistan	2	Medium	1959	1959.5	4,573.914
Afghanistan	2	Medium	1960	1960.5	4,649.573
Afghanistan	2	Medium	1961	1961.5	4,730.25
Afghanistan	2	Medium	1962	1962.5	4,816.05
Afghanistan	2	Medium	1963	1963.5	4,907.03
Afghanistan	2	Medium	1964	1964.5	5,003.245

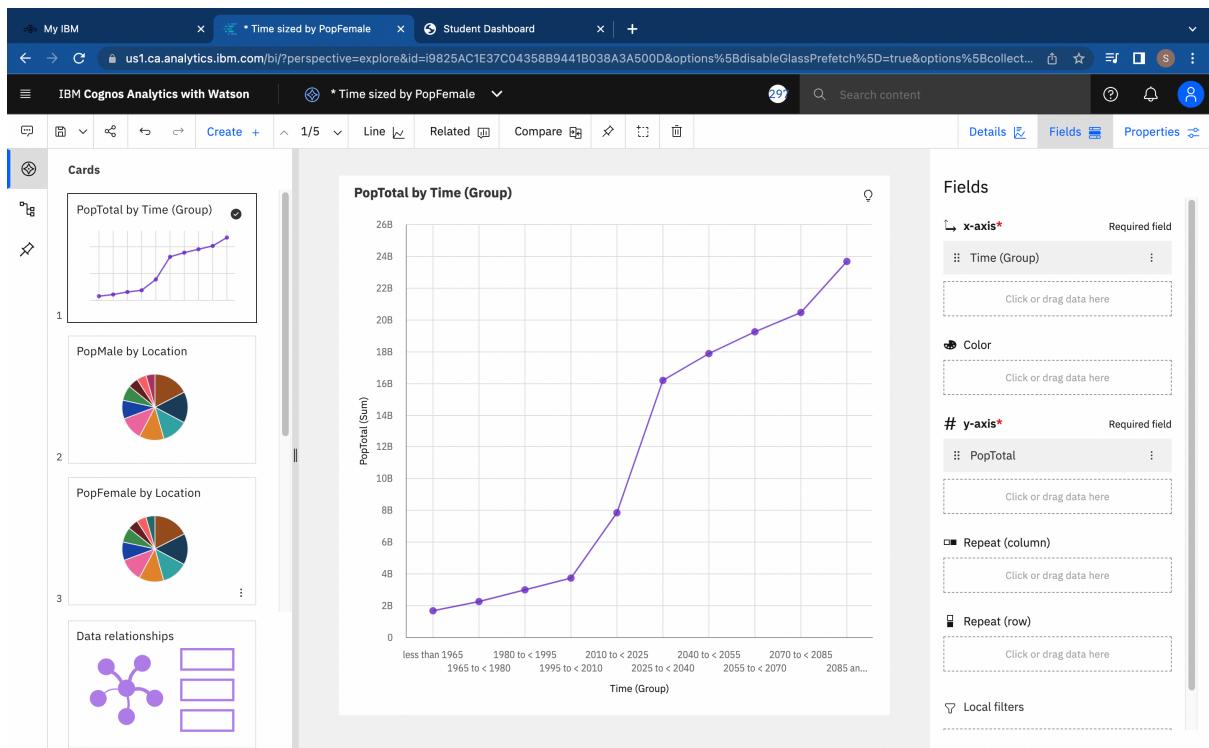
Data visualization Charts

Using the given dataset, we plan to create various graphs and charts to highlight the insights and visualizations.

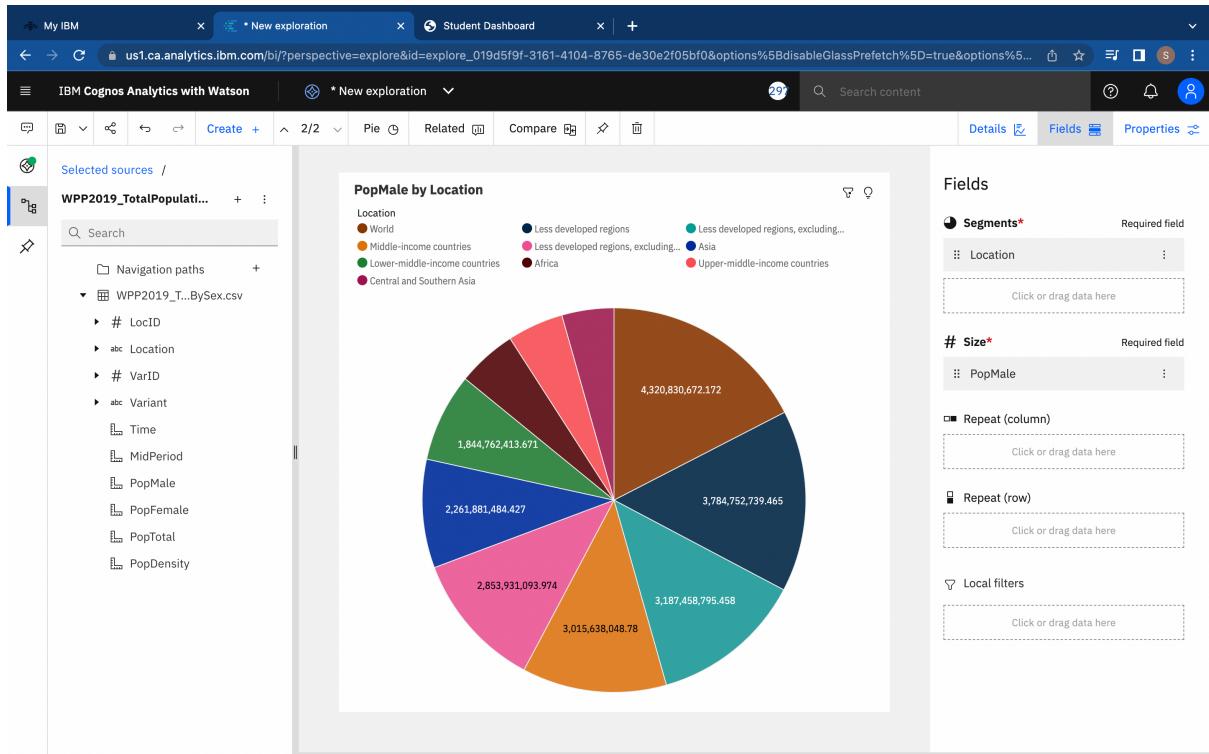
- **Top10 Pop Total by Location Using Tree Map**



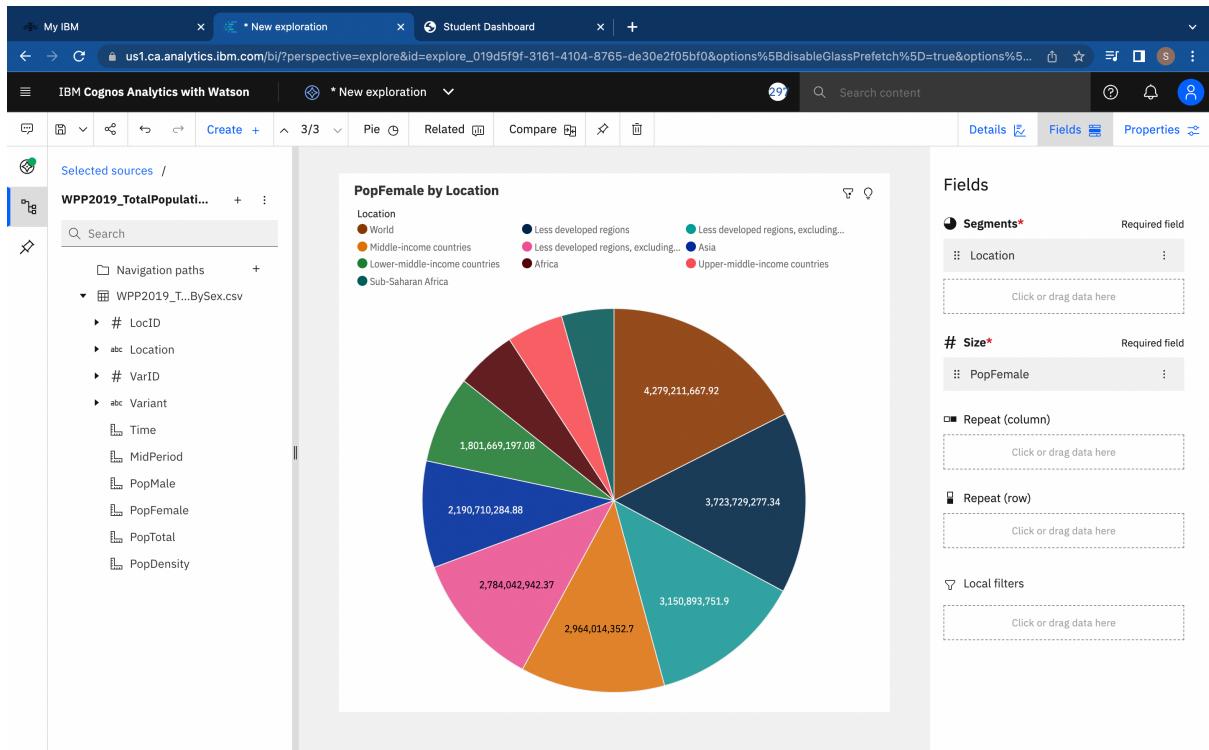
- **Pop Total By Time Using Line Chart**



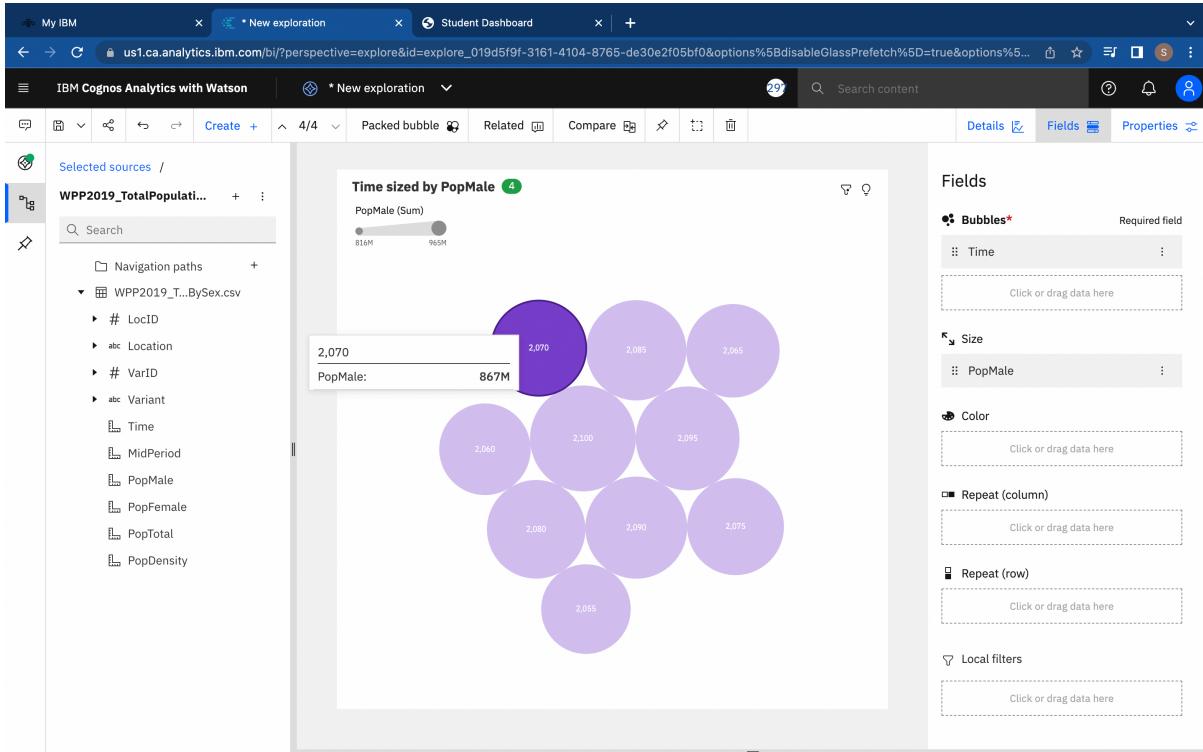
- Pop Male by Location Using Pie Charts



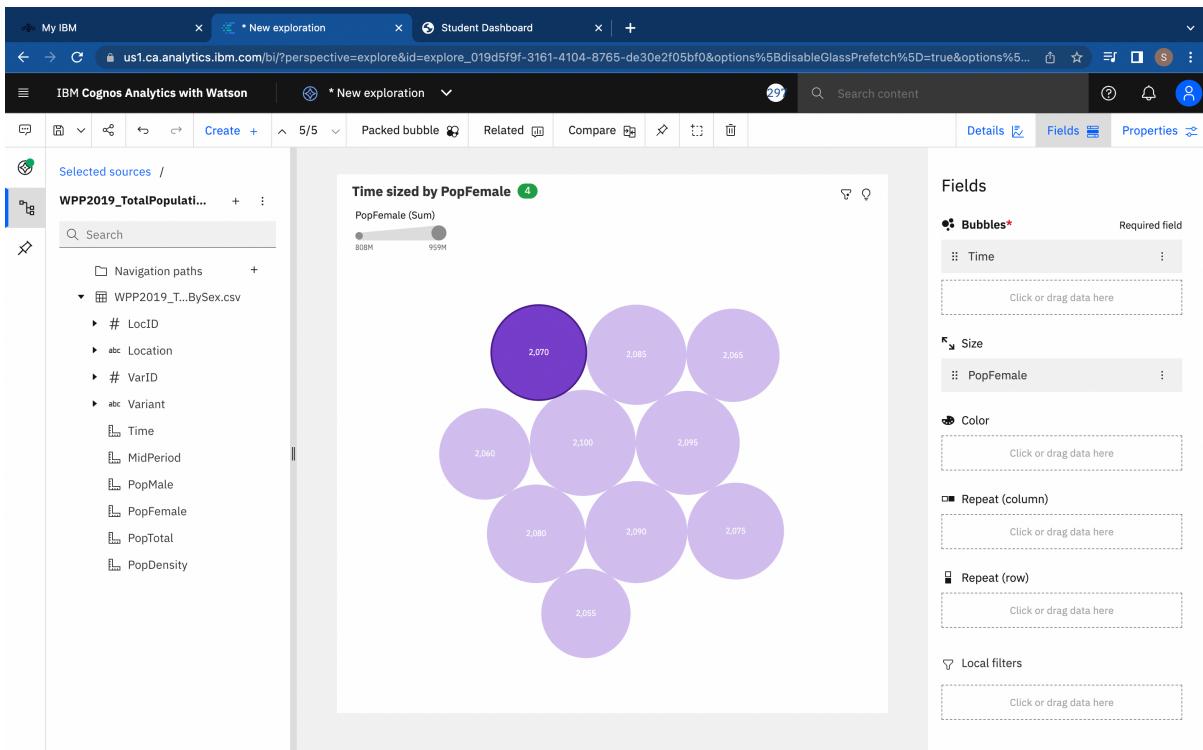
- Pop Female by Location Using Pie Charts



- Pop Male by Time Using Packed Bubble Charts

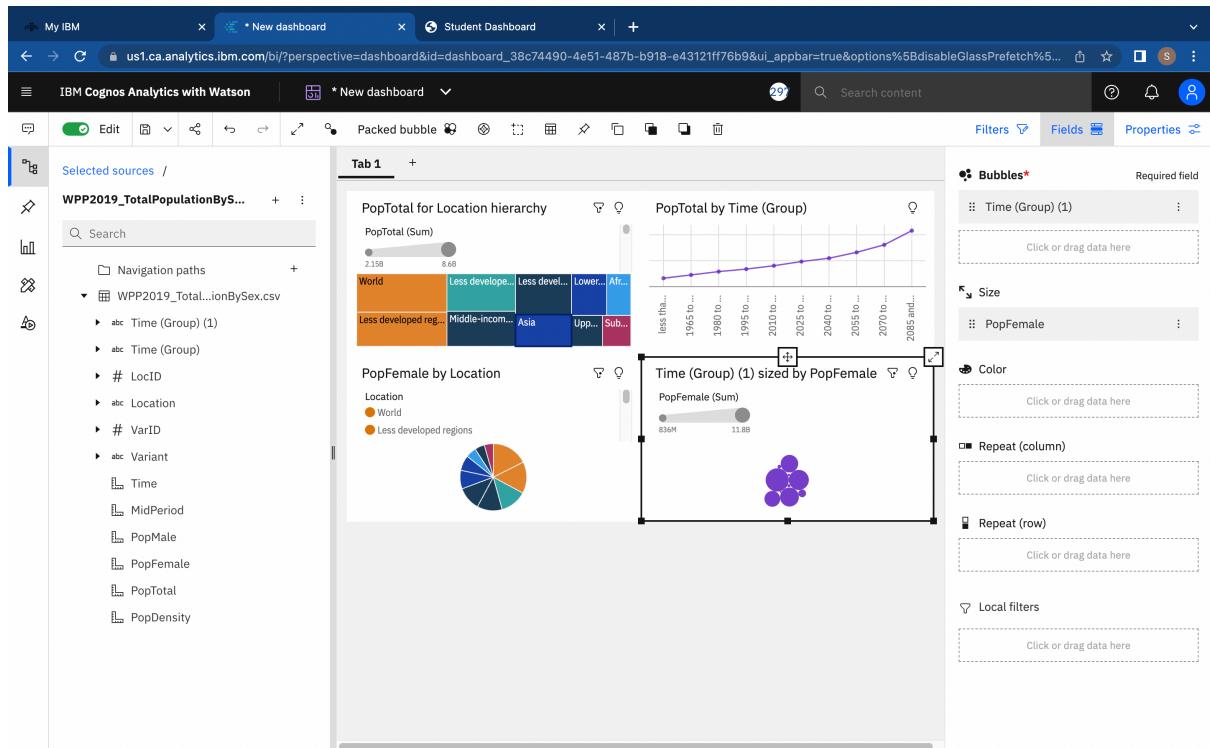


- Pop Female Using Packed Bubble Charts

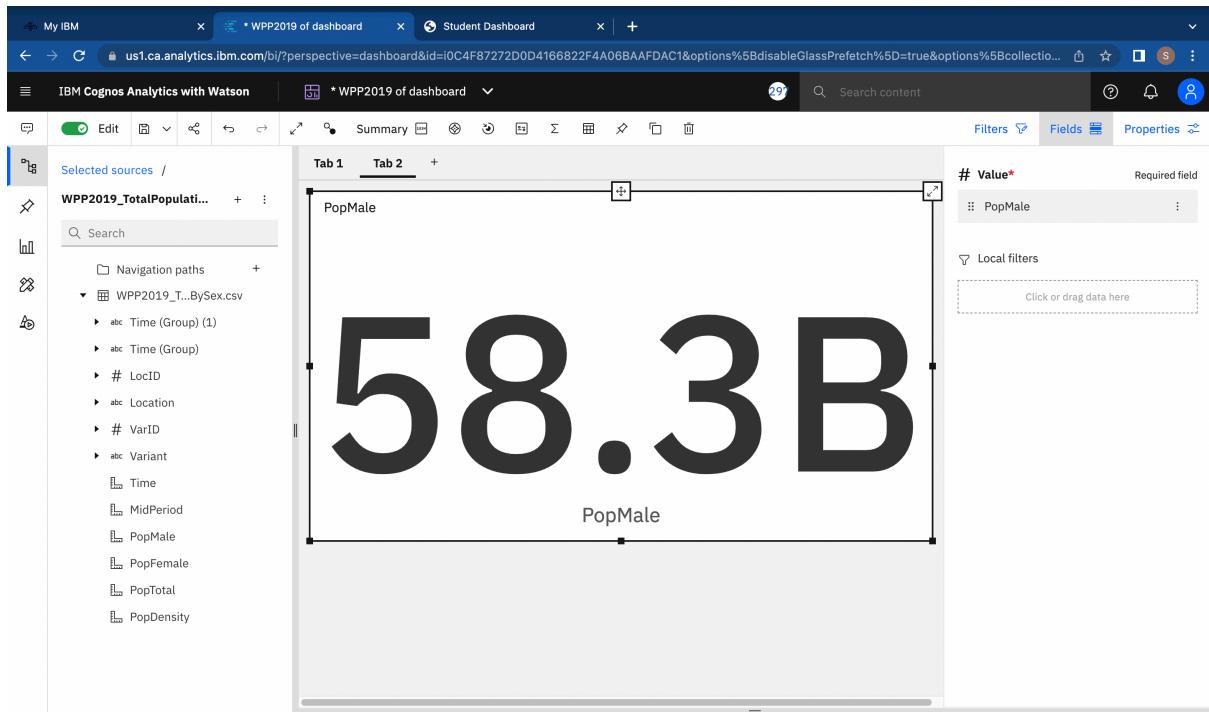


Building of Dashboard

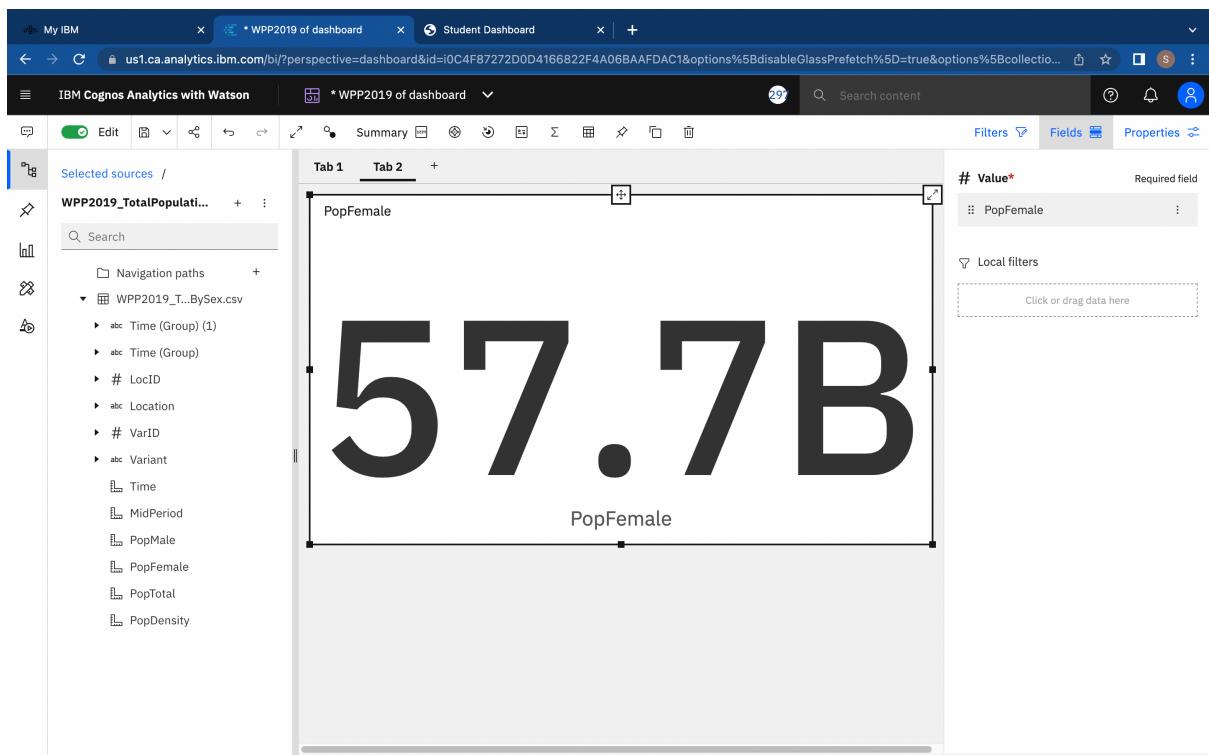
1. PopTotal for Location hierarchy
2. PopTptal by Time(Group)
3. PopFemale by Location
4. Time sized by PopFemale



- Pop Male Using Summary



- Pop Female Using Summary



- Pop Total Using Summary

The screenshot shows a dashboard titled "WPP2019 of dashboard" in the IBM Cognos Analytics with Watson interface. The main content area displays a large, bold number "116B" with the label "PopTotal" below it. This is a summary field, indicated by the "Summary" icon in the toolbar. The left sidebar shows the navigation path: "Selected sources / WPP2019_TotalPopulati...". The right sidebar includes sections for "Filters", "Fields", and "Properties", with "Required field" status for the "Value" field. A local filters section is also present.