

2012

# Visual Intelligence User Guide

by YUNUS KALDIRIM

This document is prepared for easy understand of the software

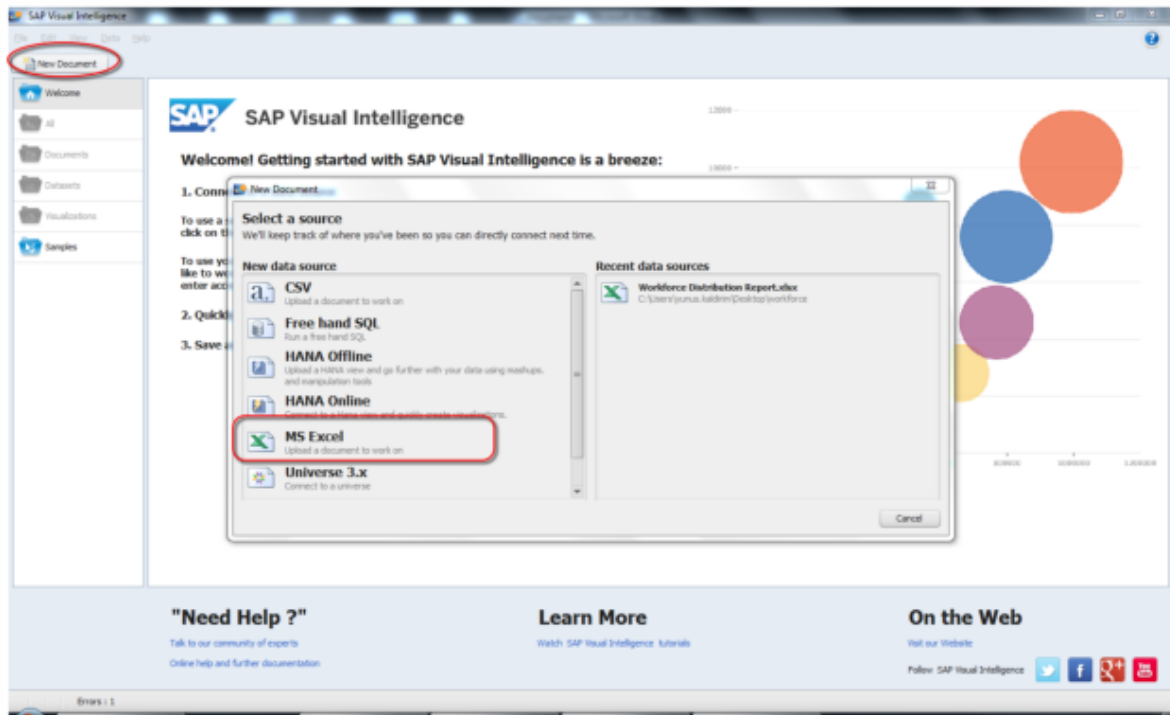
01.01.2012



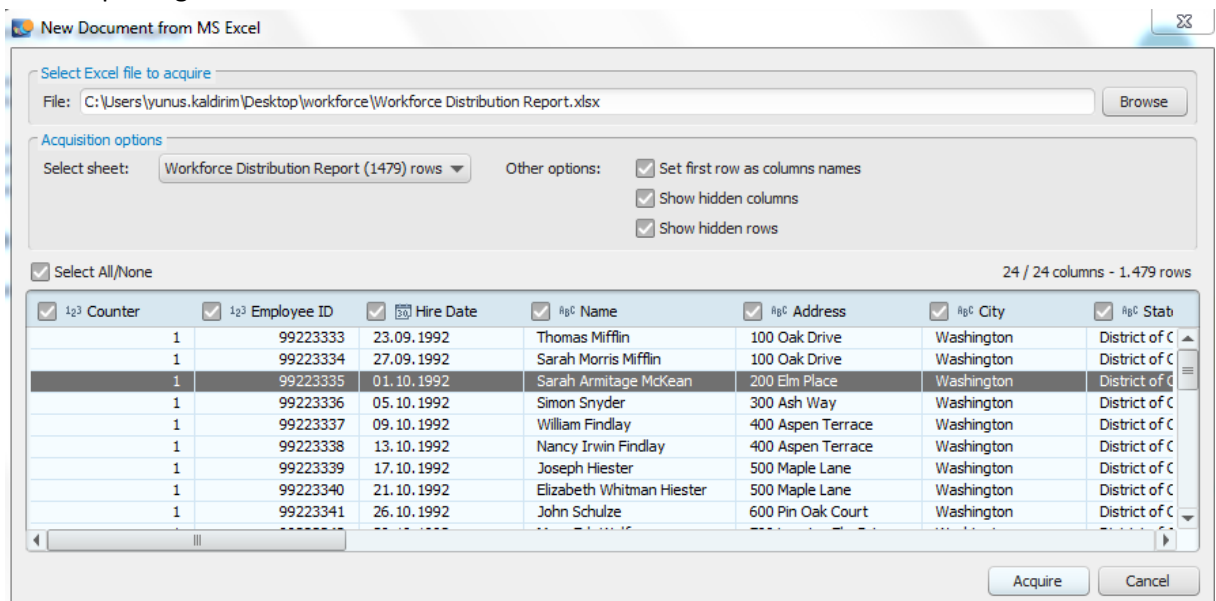
# Visual Intelligence User Guide

## 1. Creating New Document sourced on Excel

We are clicking New document and selecting MS Excel as type. Also We can run recent data source.



Then importing file data.



We are able to select sheet and we see some options to define file structure.

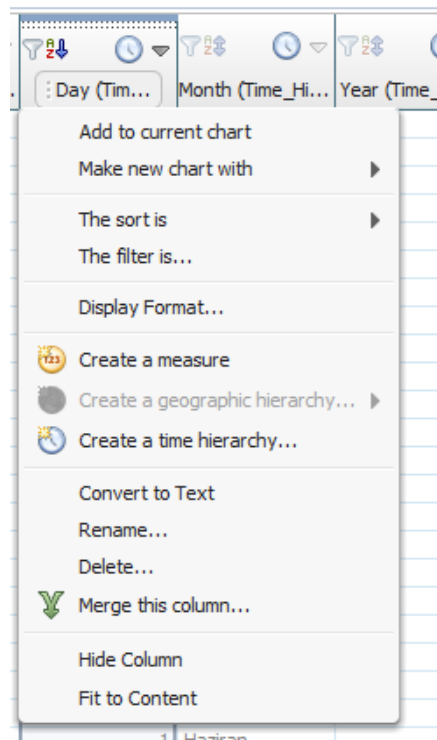
# Visual Intelligence User Guide

## 2. Working on Visual Intelligence Data

We see all imported data. System is automatically creating column names as attributes.

The screenshot shows the SAP Visual Intelligence application window. The main area displays a data table with 24 columns. The columns are: Counter, Employee ID, Hire Date, Name, Address, City, State, Male/Female, Zip Code, Phone, Cost Center, Appraisal Rating, and Employee Type. The table contains 1479 rows of data. The interface includes a sidebar on the left with filters and a top menu bar with options like File, Edit, View, Data, and Help. The status bar at the bottom indicates 'Showing: 1479 / 1479 Rows - 24 / 24 Columns'.

We are able to reorder any column by select and move it or we can change column name as easy as double click column. Also we can sort , filter or change format of data.



## Visual Intelligence User Guide

Let's do a format change on Annual Salary. We will use 1000 separator on the field.

Occupation Code	Pay Scale Grade	Pay Scale Step	Annual Salary	Retir
Auditing	9	10	53234,00	
Information T...	10	10	58622,00	
			64403,00	
			77194,00	
			43521,00	
			43521,00	
			77194,00	
			56148,00	
			37941,00	
			26571,00	
			29729,00	
			49139,00	
			49139,00	
			41289,00	
			50504,00	
Auditing	9	8	50504,00	
Auditing	9	8	50504,00	

Choose a display format for Annual Sal...

☐ Use scientific number format

☒ Use 1000 separator

Number of decimals : 2

Sample: 123.123.123,12

OK Cancel

**The Result:**

Occupation Code	Pay Scale Grade	Pay Scale Step	Annual Salary	Retirement
g	9	10	53.234,00	1
ation T...	10	10	58.622,00	1
ation T...	11	10	64.403,00	1
g	12	10	77.194,00	1
ation T...	8	10	43.521,00	1
ation T...	7	10	43.521,00	1
ation T...	12	10	77.194,00	1
ation T...	11	5	56.148,00	1
g	8	5	37.941,00	
aneous ...	4	4	26.571,00	
aneous ...	5	4	29.729,00	
g	9	7	49.139,00	1
g	9	7	49.139,00	1
g	8	8	41.289,00	
g	9	8	50.504,00	1

# Visual Intelligence User Guide

## 2.1 Semantic Elements

System is automatically informing us for semantic elements.

*“Using measures and hierarchies makes charting easier; measures allow easy manipulation of calculations, and hierarchies allow you to use a natural grouping of related columns. You can create measures and hierarchies manually, or let SAP Visual Intelligence detect columns that are potential measures, as well as time and geography hierarchies when you acquire data”*

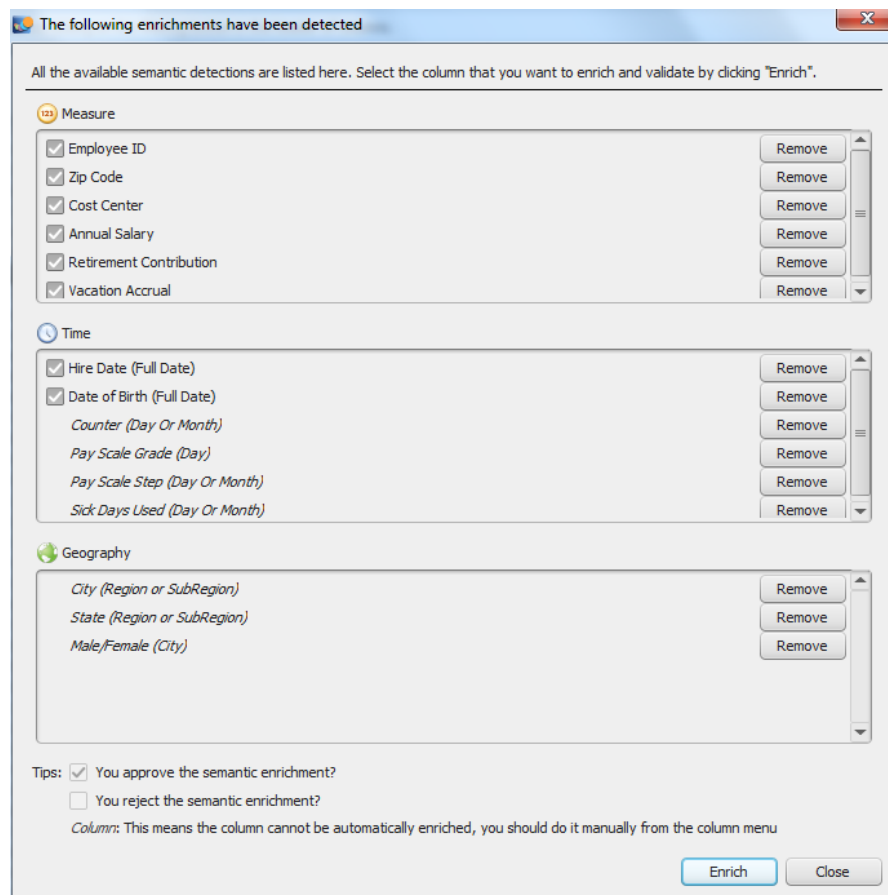
Employee Type	1	99224345	24.10.2003	Jace Gardner	61642 Under ...	Washington	District of Col...	Male
Health Plan Text	1	99224346	29.10.2003	Hector Stephens	142154 Clear ...	Washington	District of Col...	Male
Hire Date	1	99224347	02.11.2003	Josue Payne	120848 Coloni...	Washington	District of Col...	Male
Male/Female	1	99224348	06.11.2003	Mario Matthews	5264 Crystal ...	Washington	District of Col...	Male
Name	1	99224349	10.11.2003	Grayson Willis	5264 Easy Lane	Washington	District of Col...	Male
Occupation Code	1	99224350	14.11.2003	Damien Ray	64108 Emeral...	Washington	District of Col...	Male
Pay Scale Grade	1	99224351	18.11.2003	Kaiden Watkins	147840 Fallen...	Washington	District of Col...	Female
Pay Scale Step	1	99224352	22.11.2003	Spencer Olson	125682 Foggy...	Washington	District of Col...	Male
Phone	1	99224353	26.11.2003	Stephen Carroll	5475 Gentle L...	Washington	District of Col...	Male
Retirement Contribution	1	99224354	30.11.2003	Edgar Duncan	5475 Golden ...	Washington	District of Col...	Male
Sick Days Used	1	99224355	04.12.2003	Wesley Snyder	66672 Grand ...	Washington	District of Col...	Male
State	1	99224356	08.12.2003	Shawna Hart	153754 Green...	Washington	District of Col...	Female
Tenure Group	1	99224357	12.12.2003	Trenton Cunni...	130709 Harve...	Washington	District of Col...	Male
Vacation Accrual	1	99224358	16.12.2003	Jared Bradley	5694 Hazy Road	Washington	District of Col...	Male
Work Schedule	1	99224359	20.12.2003	Jeffrey Lane	5694 Heather ...	Washington	District of Col...	Male
Zip Code	1	99224360	24.12.2003	Landee Andrews	69339 Hidden ...	Washington	District of Col...	Female
Inferred Attributes (0)	1	99224361	28.12.2003	Johnathan Ruiz	159904 High L...	Washington	District of Col...	Male
	1	99224362	01.01.2004	Bradley Harper	135937 Hone...	Washington	District of Col...	Male
	1	99224363	05.01.2004	Braxton Fox	5922 Indian S...	Washington	District of Col...	Male
	1	99224364	09.01.2004	Ryder Riley	5922 Iron Way	Washington	District of Col...	Male
	1	99224365	13.01.2004	Camden Arms...	72113 Jagged...	Washington	District of Col...	Male
	1	99224366	17.01.2004	Roman Carpe...	166300 Lazy ...	Washington	District of Col...	Male
	1	99224367	21.01.2004	Ashlie Weaver	44452 Little St...	Washington	District of Col...	Female
	1	99224368	25.01.2004	Brendan Greene	4332 Lost Way	Washington	District of Col...	Male
	1	99224369	29.01.2004	Maddox Lawr...	66432 Merry L...	Washington	District of Col...	Male
	1	99224370	02.02.2004	Sergio Elliott	99743 Middle ...	Washington	District of Col...	Male
	1	99224371	06.02.2004	Israel Chavez	11346 Misty S...	Washington	District of Col...	Male
	1	99224372	10.02.2004	Andy Sims	46320 Noble ...	Washington	District of Col...	Male
	1	99224373	14.02.2004	Lincoln Austin	4505 Old Lane	Washington	District of Col...	Male

15 semantic elements detected

Show Enrich All

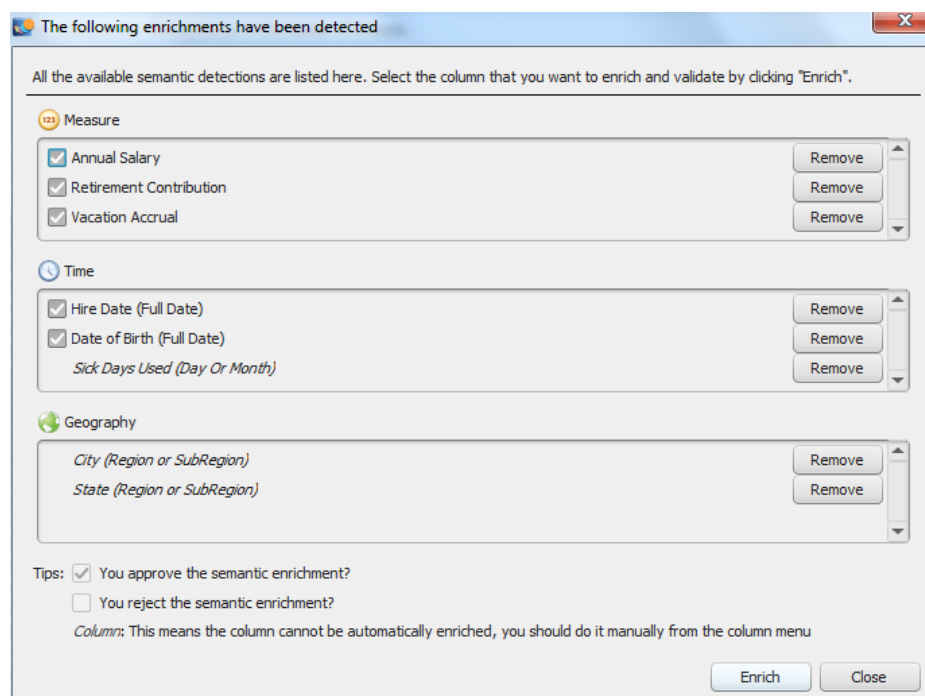
Workforce Distribution Report.xlsx/Workforce Distribution Report Showing: 1479 / 1479 Rows - 24 / 24 Columns Never Refreshed Errors : 1

# Visual Intelligence User Guide



System can create measures, time and geography elements on detected items. Of course, We should select meaningful items. Eg: Employee id is only numeric item and although system is offering this item as measure but we can remove this item.

From our perspective possible enrichment items may be below.



# Visual Intelligence User Guide

System is automatically created measures ,hierarchies and inferred attributesAfter Enriched items.

The screenshot displays the SAP Visual Intelligence interface. On the left, the 'Object Picker' panel is visible, containing four sections: 'Measures' (3 items), 'Hierarchies' (2 items), 'Attributes' (24 items), and 'Inferred Attributes' (10 items). The 'Measures' section lists 'Annual Salary', 'Retirement Contribution', and 'Vacation Accrual', all with a 'Sum' aggregation. The 'Hierarchies' section shows 'default (Time\_Hire Date)' and 'default (2) (Time\_Date of Birth)'. The 'Attributes' section lists various date-based attributes like 'Date of Birth (2)', 'Day (2)', 'Month (2)', 'Quarter (2)', 'Year (2)', 'Day', 'Hire Date (2)', 'Month', 'Quarter', and 'Year'. The 'Inferred Attributes' section lists 'Date of Birth (2)', 'Day (2)', 'Month (2)', 'Quarter (2)', 'Year (2)', 'Day', 'Hire Date (2)', 'Month', 'Quarter', and 'Year'. On the right, the 'Global Filters' section shows a list of filters: 'Counter', 'Employee ID', 'Hire Date', and 'Name'. Below this, a data grid is displayed with columns for 'Counter', 'Employee ID', 'Hire Date', and 'Name'. The grid contains 24 rows of data, each representing an employee record.

Counter	Employee ID	Hire Date	Name
1	99224333	06.09.2003	Jaidee Mi
1	99224334	10.09.2003	Alexis Nic
1	99224335	14.09.2003	Leonardc
1	99224336	18.09.2003	Santiago
1	99224337	22.09.2003	Francisc
1	99224338	26.09.2003	Caylee R
1	99224339	30.09.2003	Sharon S
1	99224340	04.10.2003	Edwin Ha
1	99224341	08.10.2003	Hudson C
1	99224342	12.10.2003	Travis Pe
1	99224343	16.10.2003	Brydie Hu
1	99224344	20.10.2003	Erica Spe
1	99224345	24.10.2003	Jace Gar
1	99224346	29.10.2003	Hector St
1	99224347	02.11.2003	Josue Pa
1	99224348	06.11.2003	Mario Ma
1	99224349	10.11.2003	Grayson
1	99224350	14.11.2003	Damien R
1	99224351	18.11.2003	Kaiden W
1	99224352	22.11.2003	Spencer I
1	99224353	26.11.2003	Stephen
1	99224354	30.11.2003	Edgar Du
1	99224355	04.12.2003	Wesley S
1	99224356	08.12.2003	Shawna f
1	99224357	12.12.2003	Trenton C
1	99224358	16.12.2003	Jared Bra
1	99224359	20.12.2003	Jeffrey L
1	99224360	24.12.2003	Landee A
1	99224361	28.12.2003	Johnatha
1	99224362	01.01.2004	Bradley f
1	99224363	05.01.2004	Braxton f

We can change some detail by right clicking items. Eg: Hide or Delete Quarter attribute in view.

# Visual Intelligence User Guide

## 2.2 Manipulation Of Data

You can find manipulation tool at the right top side of screen. We can manipulate (also a kind of summary view of data) any cell with offered actions. Of course we can change all data manually one by one but this kind of tool make everything easier. *“Options are changing selecting cell or selecting column by clicking.”*

The screenshot shows the Visual Intelligence interface. At the top, there are buttons for 'Prepare' and 'Share'. Below them is a 'Formula' input field with 'Do it', 'fx', and a dropdown arrow. A 'Global Filters' section is visible. The main data table has columns: Zip Code, Phone, Cost Center, Appraisal Ratin..., Employee Type, Date of Birth, Tenure Group, Work Schedule, and Health Plan Text. The 'Work Schedule' column contains values like 'Full-time', 'Full-time seasonal', 'Part-time', and 'Part-time seasonal'. On the right, the 'Manipulation Tools' panel is open, showing a list of 'All Values' with their counts: Full-time (1076), Full-time seasonal (186), Part-time seasonal (98), Part-time (66), and Full-time seasonal (53). Below this, 'Cell Actions' are listed, including 'Sets text to lowercase', 'Find "" and replace it with ""', 'Fill with "" character at the beginning to get the length ""', 'Trim leading & trailing "" character', and 'Replace selected values by "Full-time"'. The 'Apply to' section has radio buttons for 'All cells' (selected) and 'Same cell values'.

We see “full-time” and “Full time” values as different above. But We know these are same. So we can replace one to other.

After Manipulation:

The screenshot shows the Visual Intelligence interface after data manipulation. The 'Manipulation Tools' panel is still open, but the 'All Values' list now shows: Full-time (1262), Part-time seasonal (98), Part-time (66), and Full-time seasonal (53). The 'Full-time' value has increased from 1076 to 1262, indicating that the replacement was successful. The data table on the left shows the 'Work Schedule' column with values like 'Full-time', 'Full-time seasonal', 'Part-time', and 'Part-time seasonal'. The 'Health Plan Text' column contains values like 'Aetna Health ...' and 'Aetna Open A...'. The 'Apply to' section has radio buttons for 'All cells' (selected) and 'Same cell values'.



Work Schedule	Seasonality
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Part-time	non seasonal
Part-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal
Full-time	non seasonal

### Manipulation Tools

Filter items

- All Values
  - non seasonal 1328
  - seasonal 151

Distinct Count : 2

### Column Actions

- Duplicate this column
- Rename this column to "Seasonality"
- Split column on " "
  - Split on : <Space>
- Remove this column
- Sets text to lowercase
- Find "" and replace it with ""
- Fill with "" character at the beginning to get the length ""

# Visual Intelligence User Guide

## 2.3 Working With Facets

Facets are kind of easily filtering tool to see summary of data. You can double click to a value to filter and see result.

*“Data is presented as columns with only the unique values shown. The repeated values in columns are not shown. Using facets can be useful if you have many repeated values.”*

The screenshot shows the Visual Intelligence application interface. The 'Facets' tab is selected in the top navigation bar. On the left, the 'Object Picker' pane shows a list of measures and hierarchies. The main area displays a data table with columns: Counter, Employee ID, Hire Date, Name, Address, and City. A red box highlights the 'Facets' tab and the data table. Another red box highlights the 'Global Filters' section at the top of the table, which contains a filter for 'Work Schedule: Part-time'.

Counter	Employee ID	Hire Date	Name	Address	City
1	99223333	23.09.1992	Diego Sanchez	1000 Oak Drive	Washington
	99223334	27.09.1992	Adam Cook	1100 Elm Place	
	99223335	01.10.1992	Brody Rogers	1200 Ash Way	
	99223336	05.10.1992	Carlos Morgan	125682 Foggy Way	
	99223337	09.10.1992	Sebastian Bell	1300 Aspen Terrace	
	99223338	13.10.1992	Xavier Reed	130709 Harvest Lane	
	99223339	17.10.1992	Bryan Ward	135937 Honey Road	
	99223341	26.10.1992	Jesus Richardson	147840 Fallen Street	
	99223342	30.10.1992	Liam Murphy	1500 Pin Oak Court	
	99223343	03.11.1992	Sean Torres	153754 Green Way	
	99223344	07.11.1992	Alex Gray	159904 High Lane	
	99223345	11.11.1992	Blake Kelly	1700 Pine Terrace	
	99223346	15.11.1992	Brady Wood	1800 Evergreen Place	
	99223347	19.11.1992	Brian James	1900 Oak Drive	
	99223348	23.11.1992	Caden Barnes	400 Aspen Terrace	
	99223349	27.11.1992	Carson Brooks	500 Maple Lane	
	99223350	01.12.1992	Devon Burton	5264 Crystal Road	
	99223351	05.12.1992	Dominick Garza	5264 Easy Lane	
	99223352	09.12.1992	Drew Stanley	5475 Gentle Lane	
	99223353	13.12.1992	Eric Ramirez	5475 Golden Road	
	99223354	17.12.1992	Exeliel Harvey	5694 Hazy Road	
	99223355	21.12.1992	Gregory Alvarez	5694 Heather Street	
	99223356	25.12.1992	Griffin Little	5922 Indian Street	
	99223357	29.12.1992	Jaden Watson	64108 Emerald Road	
	99223358	02.01.1993	Johnny George	66672 Grand Street	
	99223359	06.01.1993	Kinaston Fernandez	69339 Hidden Way	

Let's do a filter and an analyse by work schedule and see results

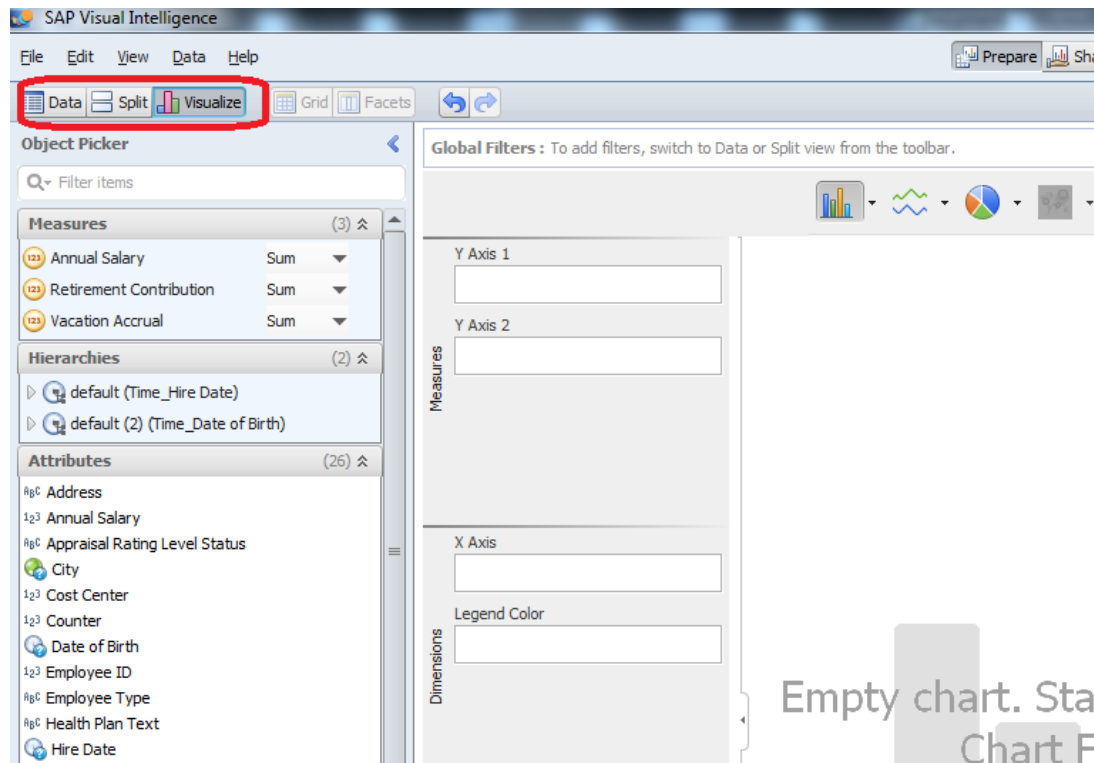
We can say **“24 person's occupation was secretary who is working part-time”**

The screenshot shows the Visual Intelligence application interface with a filter applied. The 'Global Filters' section at the top shows 'Work Schedule: Part-time'. The data table is filtered to show only part-time employees. A red box highlights the 'Global Filters' section. Another red box highlights the 'Occupation Code' column in the table.

Tenure Group	Work Schedule	Health Plan Text	Occupation Code	Pay Scale Grade	Pay Scale
tenure	Part-time	None	Information Receptionist	5	41
		Aetna Heal... and Family	Clerk-Typist	4	22
		Aetna Ope... and Family	Miscellane...d Assistant	14	18
		Aetna Heal... - Self Only	Secretary	24	16
		Aetna Heal...f and Family		3	16
		Aetna Open... - Self Only		7	10
		Aetna Heal... - Self Only		15	9
		Aetna Open... and Family		8	1
				2	5
				9	5
				10	5
				13	5
				12	3

## 3. Analyzing And Visualizing Data

We can visualize data by splitting grid or on a single screen.

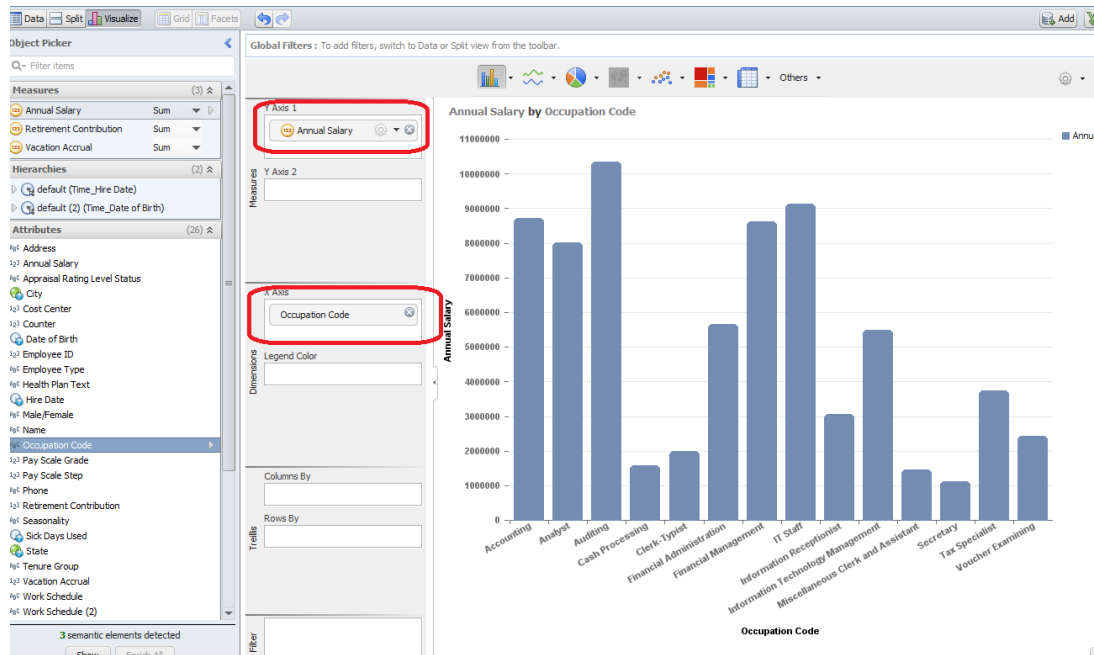


Let's do a visualization on Annual Salary by Occupation Code.

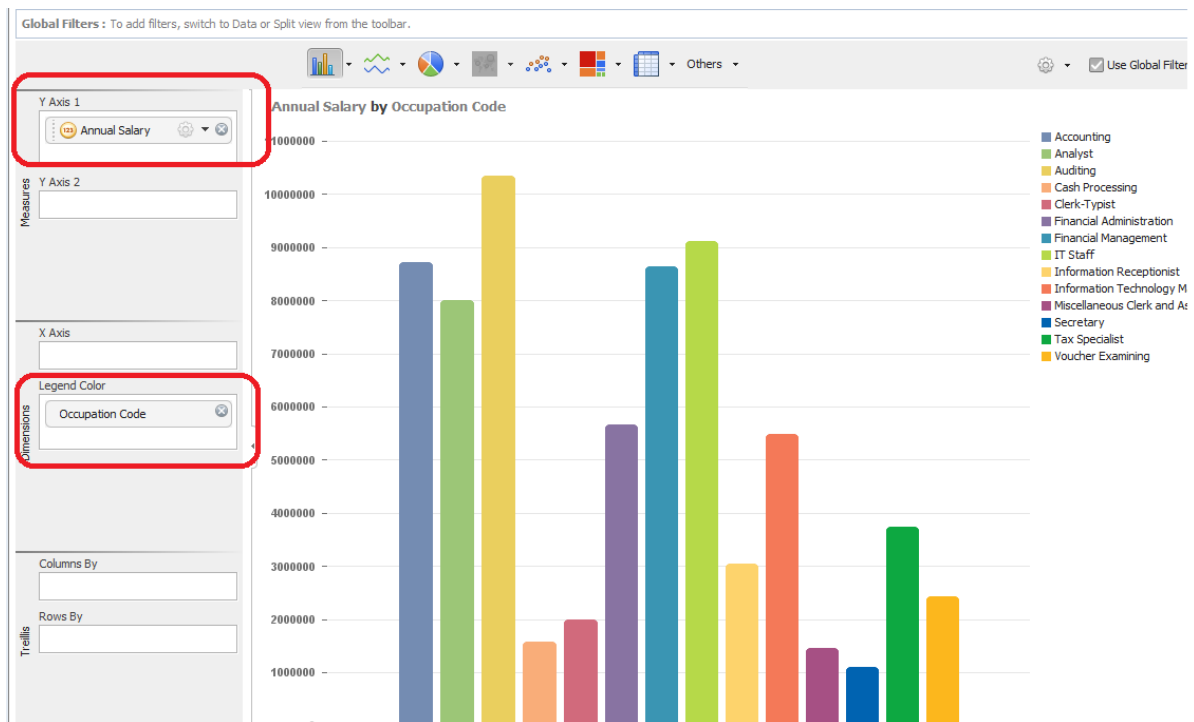
- Select and drop Annual Salary measure to Y axis

# Visual Intelligence User Guide

-Select and drop Occupation Code to X axis



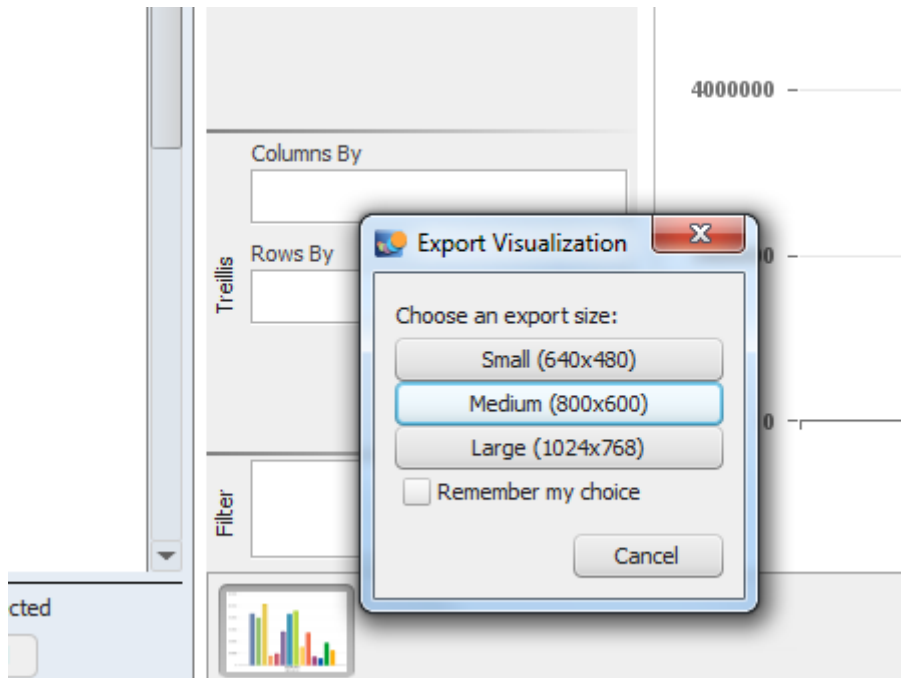
If we want to differentiate by color we can use Occupation Code as Legend Color.



## Visual Intelligence User Guide

---

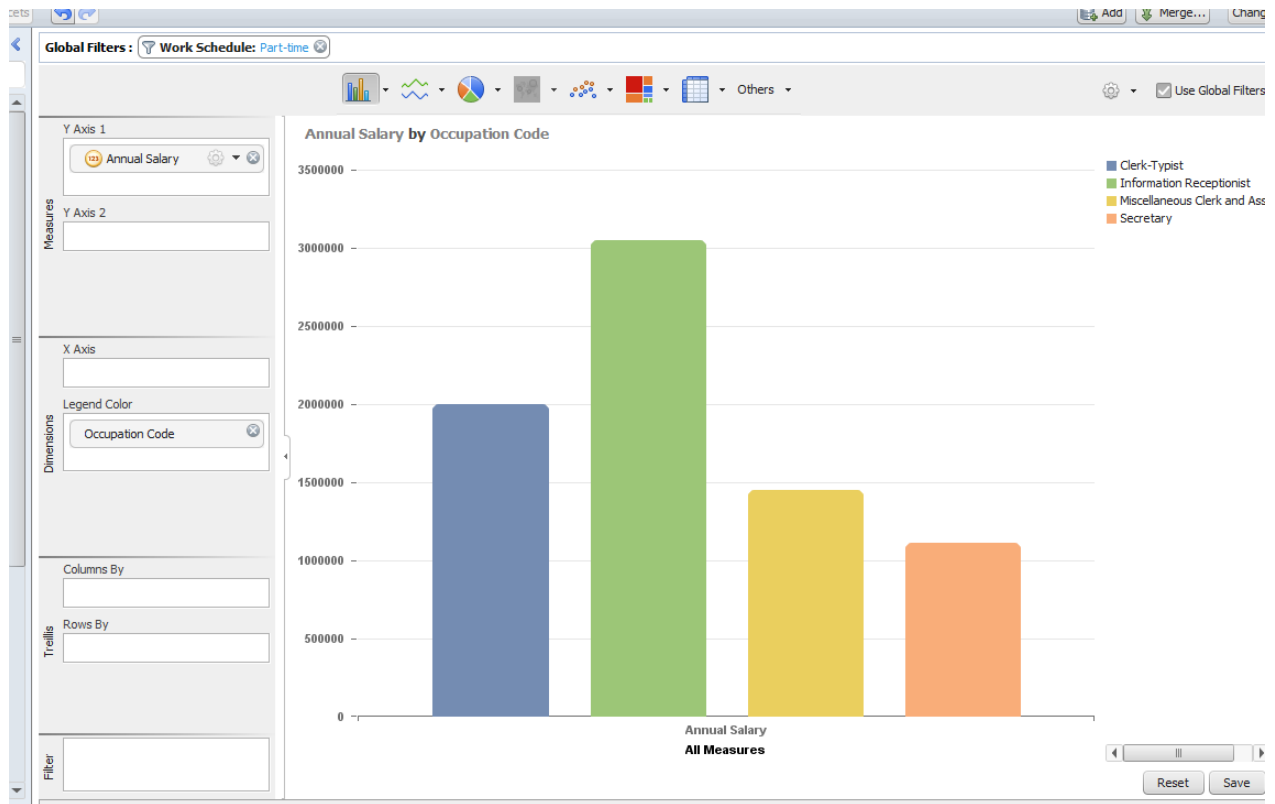
We can export visualisation after “save” visualization. We are selecting item on the pane then clicking “copy” .



# Visual Intelligence User Guide

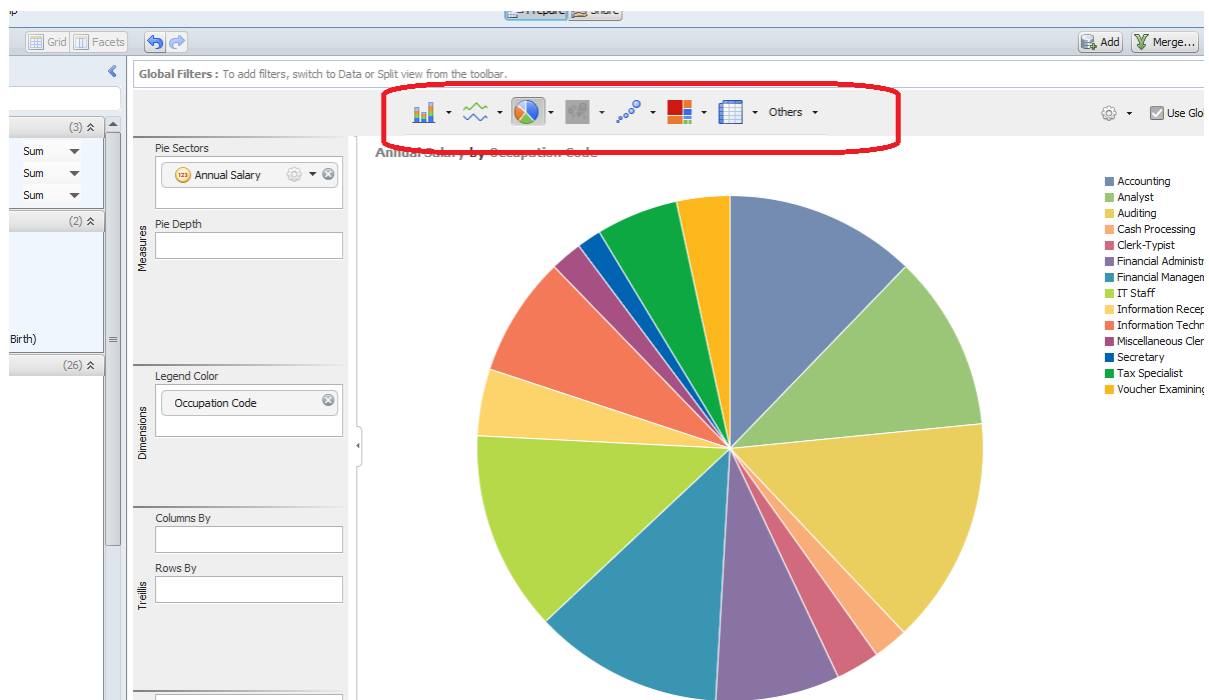
If you want to filter data. You should use data grid or data facets. You can have a look 2.3 item working with facets. We filtered data with work schedule is Part-Time.

## The Result:



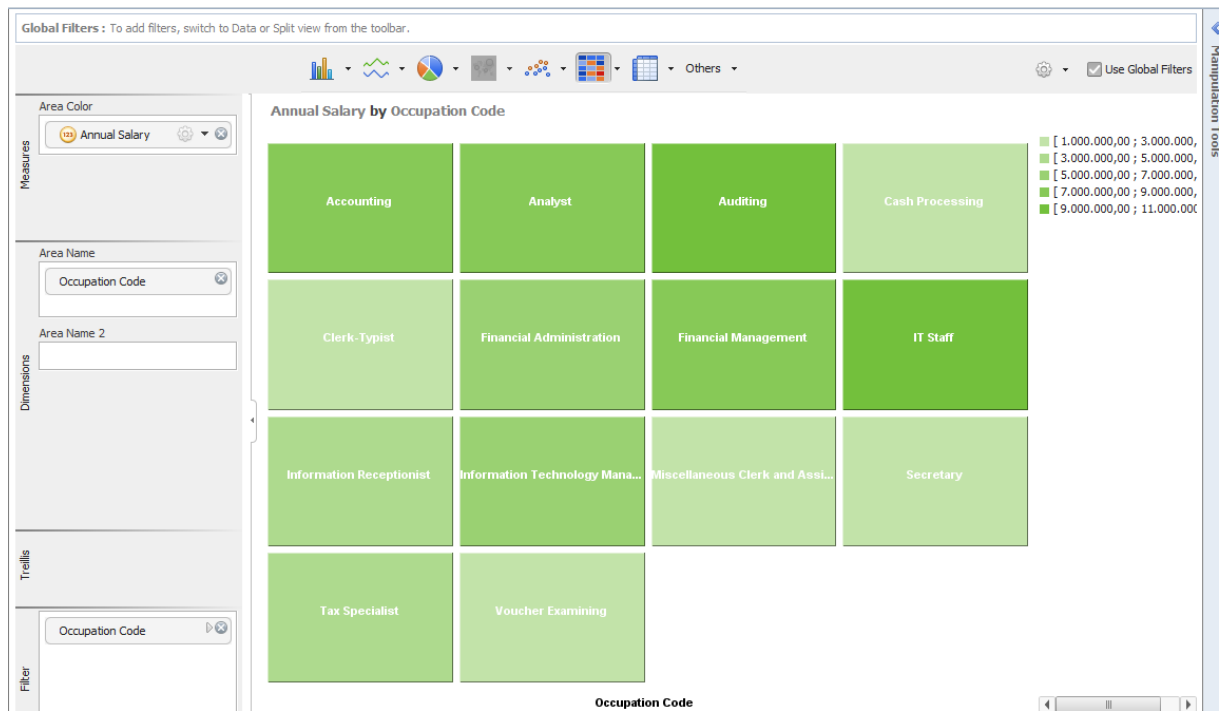
Of course you can change graph style over toolbar.

- Maybe a Pie chart is better



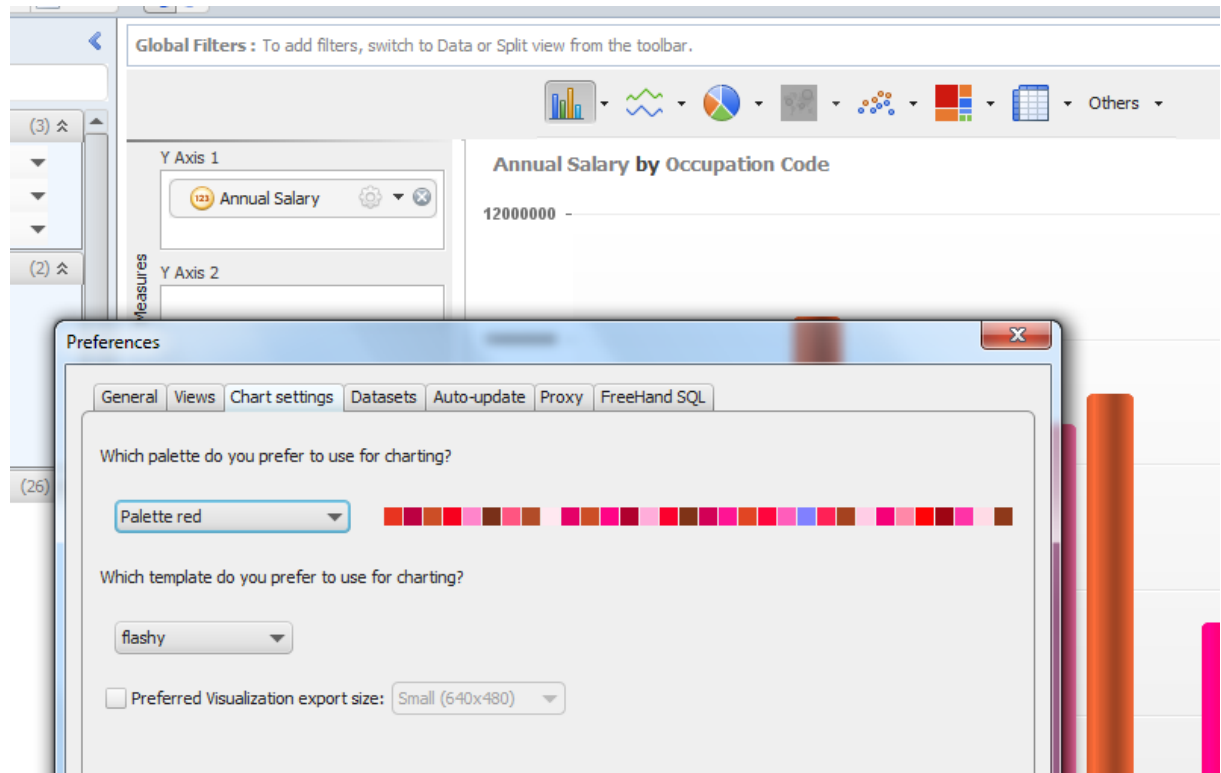
# Visual Intelligence User Guide

- Or A HeatMap is better



## 4. Preferences to better View

You can do changes on chart settings in file>preferences for better view. Select a palette and template for charting.



## 5. Amazing Question: What is the best graph form my data?

We can answer this question as many as different way.

- The best clarified and result summarized graph is the right one.
- Look advantages and disadvantages of charts and select the best suitable
- Abracadabra is a good fictitious name to use when you can't think of anything better.
- The best way to select the right chart for your data is to ask yourself what you intend to analyze
- Select any graph and see how it looks.

It is pretty difficult to have a guideline for all types of charts that soak in all kinds of data. For that a book will not be enough, let alone a tutorial.



# Visual Intelligence User Guide

## 6. Let's Do Geeks

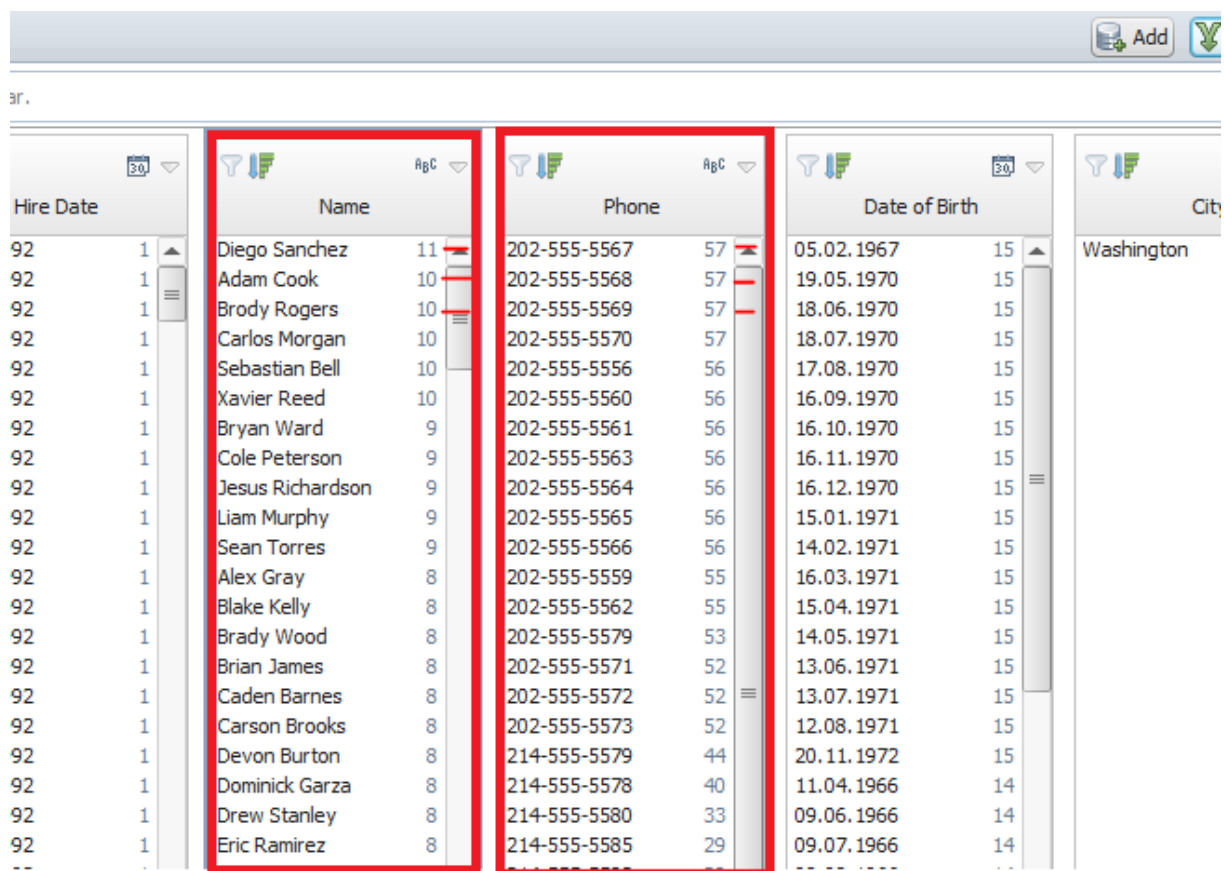
After understanding SAP Visual Intelligence tool.

- First Lesson: Visualizing with nice colors and graphs doesn't mean right result are being shown.
- Second Lesson: If I'm not the owner of data(creator of data) i should understand data.
- Third Lesson: Data source of report should be verified before conclusions. If I have a line in data source, can i create correct report with it?

### 6.1 Understand data and See Unique Employee

-Let's have a look Names And Phones. Do you think there are repeating data in our data sheet?

Of course ☺ We should clean data with SAP VI easily to make correct analyzing.



Hire Date	Name	Phone	Date of Birth	City
92	Diego Sanchez	202-555-5567	05.02.1967	Washington
92	Adam Cook	202-555-5568	19.05.1970	
92	Brody Rogers	202-555-5569	18.06.1970	
92	Carlos Morgan	202-555-5570	18.07.1970	
92	Sebastian Bell	202-555-5556	17.08.1970	
92	Xavier Reed	202-555-5560	16.09.1970	
92	Bryan Ward	202-555-5561	16.10.1970	
92	Cole Peterson	202-555-5563	16.11.1970	
92	Jesus Richardson	202-555-5564	16.12.1970	
92	Liam Murphy	202-555-5565	15.01.1971	
92	Sean Torres	202-555-5566	14.02.1971	
92	Alex Gray	202-555-5559	16.03.1971	
92	Blake Kelly	202-555-5562	15.04.1971	
92	Brady Wood	202-555-5579	14.05.1971	
92	Brian James	202-555-5571	13.06.1971	
92	Caden Barnes	202-555-5572	13.07.1971	
92	Carson Brooks	202-555-5573	12.08.1971	
92	Devon Burton	214-555-5579	20.11.1972	
92	Dominick Garza	214-555-5578	11.04.1966	
92	Drew Stanley	214-555-5580	09.06.1966	
92	Eric Ramirez	214-555-5585	09.07.1966	

First of all we need to clarify relations in data. Eg:We filter Diego sanchez. We have 11 Diego. It seems Phone& Date of Birth& Address are same with specific Diego Sanchez. Hmm ☺

# Visual Intelligence User Guide

Global Filters: Name: Diego San...					
Occurrences					
Annual Salary (Sum)					
Retirement Contribution (Sum)					
Vacation Accrual (Sum)					
Name	Employee ID	Hire Date	Phone	Date of Birth	Address
Diego Sanchez	99223403	30.06.1993	202-555-5560	05.02.1967	31643 Tawny Way
	99223559	17.03.1995	214-555-5585	11.12.1971	4685 Pine Way
	99223746	03.04.1997	214-555-5586	20.09.1972	239 Run Way
	99223936	02.05.1999			
	99224092	16.01.2001			
	99224185	23.01.2002			
	99224191	16.02.2002			
	99224260	19.11.2002			
	99224416	03.08.2004			
	99224538	05.12.2005			
	99224669	12.05.2007			

## Conclusion:

“Looking to Facets, ordering and filtering data Hmmm. We can say some measures or attributes (cost center, pay scale, annual salary etc) are being changed and employee having a new number, a new hire date and being added as a new line to the list yearly. But in Any Case we know some Diego’s are same.”