

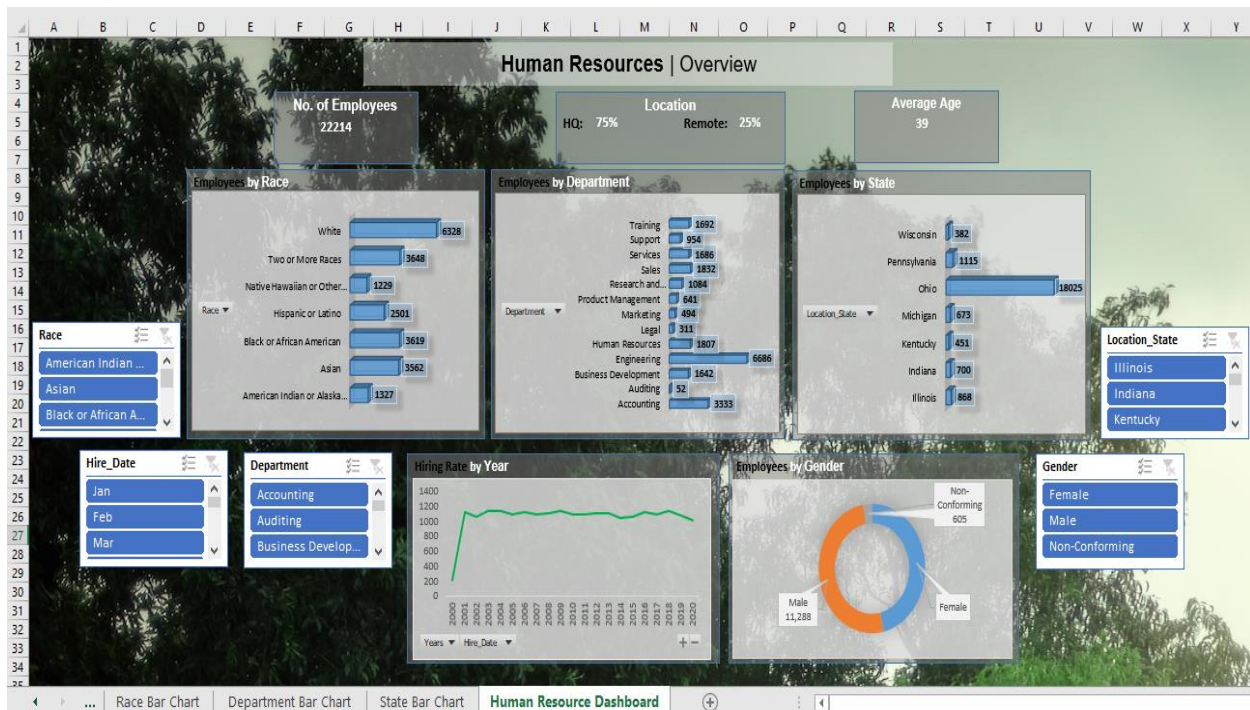
Human Resources | Overview Dashboard

Background/Scenario

The dataset for this project was obtained from [data world](https://data.world). Human resource overview data serves several important purposes in an organization. It provides a snapshot of the workforce, its composition, and its performance. The tool that was used for this analysis is Microsoft Excel. Here are some of the key purposes of human resource overview data:

1. Workforce planning
2. Recruitment and hiring
3. Talent development
4. Performance management
5. Diversity and inclusion

Below is a screen shot of the complete dashboard:



Part 1: Explore a Sample Set of Data**Step 1:** Download the dataset and open the file.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	id	first_name	last_name	birthdate	gender	race	department	jobtitle	location	hire_date	termdate	location_city	location_state
2	00-0037846	Kimmy	Walczynski	06/04/1991	Male	Hispanic or Latino	Engineering	Programmer Analyst	Headquarters	1/20/2002		Cleveland	Ohio
3	00-0041533	Ignatius	Springett	6/29/1984	Male	White	Business Development	Business Analyst	Headquarters	04/08/2019		Cleveland	Ohio
4	00-0045747	Corbie	Bittlestone	7/29/1989	Male	Black or African American	Sales	Solutions Engineer	Headquarters	10/12/2010		Cleveland	Ohio
5	00-0055274	Baxy	Matton	9/14/1982	Female	White	Services	Service Tech	Headquarters	04/10/2005		Cleveland	Ohio
6	00-0076100	Terrell	Suff	04/11/1994	Female	Two or More Races	Product Management	Business Analyst	Remote	9/29/2010	2029-10-25	Flint	Michigan
7	00-0116166	Kacie	Offiler	1/18/1971	Male	Asian	Engineering	Developer III	Headquarters	09/01/2018		Cleveland	Ohio
8	00-0363185	Sandro	Admans	11/19/1979	Male	Two or More Races	Product Management	Quality Engineer	Headquarters	11/08/2012		Cleveland	Ohio
9	00-0380704	Eugene	Lehman	10/14/1988	Female	Black or African American	Engineering	Developer I	Headquarters	6/27/2007		Cleveland	Ohio
10	00-0381660	Wainwright	Corfield	12/13/1996	Male	Asian	Engineering	Business Systems Development Analyst	Headquarters	2/20/2001	2008-12-05	Cleveland	Ohio
11	00-0419202	Dyann	Isoldi	3/27/1980	Male	Two or More Races	Engineering	Web Developer I	Headquarters	1/27/2005		Cleveland	Ohio
12	00-0472287	Grantley	Oret	09/06/1975	Male	Two or More Races	Services	Service Tech II	Headquarters	11/01/2004		Cleveland	Ohio
13	00-0472832	Elmore	Worner	01/07/1966	Female	White	Engineering	Business Systems Development Analyst	Headquarters	12/05/2000		Cleveland	Ohio
14	00-0566380	Dud	Brain	3/17/1984	Male	Two or More Races	Business Development	Business Analyst	Headquarters	9/17/2008		Cleveland	Ohio
15	00-0571075	Aggie	Conford	11/02/1971	Male	White	Business Development	Research Assistant II	Headquarters	11/25/2015		Cleveland	Ohio
16	00-0624189	Katerina	Rosborough	8/20/1967	Female	Hispanic or Latino	Engineering	Analyst Programmer	Headquarters	5/17/2019		Cleveland	Ohio
17	00-0715212	Alida	Longley	1/28/1973	Female	American Indian or Alaska Native	Accounting	Staff Accountant III	Headquarters	02/04/2002		Cleveland	Ohio
18	00-0755645	Laraine	Petre	05/11/1967	Male	White	Engineering	Software Engineer I	Headquarters	9/30/2010		Cleveland	Ohio
19	00-0778934	Gareth	MacCook	2/21/1987	Female	Black or African American	Legal	Senior Attorney	Remote	2/18/2010		Flint	Michigan
20	00-0794247	Scottie	Chestney	2/23/1972	Female	Black or African American	Engineering	Data Visualization Specialist	Headquarters	07/03/2002		Cleveland	Ohio
21	00-0948136	Christophorus	Boseley	5/23/1983	Female	Two or More Races	Marketing	Senior Editor	Headquarters	09/06/2007		Cleveland	Ohio
22	00-0971612	Arienne	Froome	08/01/1999	Male	Two or More Races	Engineering	Software Consultant	Headquarters	04/09/2015		Cleveland	Ohio
23	00-1051096	Todd	Cashen	6/19/1999	Female	White	Accounting	Financial Analyst	Remote	6/20/2014		Pittsburgh	Pennsylvania
24	00-1052230	Elmo	McNee	12/16/1988	Female	Black or African American	Services	Service Manager	Headquarters	7/18/2002	2006-05-22	Cleveland	Ohio
25	00-1100714	Regen	Natzger	04/06/1990	Male	White	Human Resources	Senior Recruiter	Headquarters	7/23/2016	2022-07-12	Cleveland	Ohio
26	00-1147503	Penelope	Wenman	12/19/1994	Male	White	Business Development	Research Assistant II	Headquarters	09/10/2019		Cleveland	Ohio
27	00-1189819	Rudolf	Reichardt	06/05/1979	Male	Black or African American	Business Development	Business Analyst	Remote	05/07/2007	2022-02-25	Philadelphia	Pennsylvania
28	00-1222963	Tobiah	Fruchon	10/17/1991	Female	Asian	Services	Service Tech II	Headquarters	2/13/2011		Cleveland	Ohio
29	00-1268049	Fay	Monnelly	07/09/1966	Male	Native Hawaiian or Other Pacific Islander	Engineering	Software Engineer I	Headquarters	2/24/2010	2030-03-21	Cleveland	Ohio

The dataset is comprised of 13 columns and 22,214 records. The columns contain information about the employees: their name, birth date, race, what department they work at, their job title, remote/HQ, hire date, term date, city and state.

Step 2: Expand Datasheet Columns as Necessary.**Step 3:** Review the Data.

This step is of utmost importance. There's need to make sure the data is correct and in the required format. Easiest way to start is to format our data as a table.

Ctrl + A > Ctrl + T > Ok. It should look like this:

	A	B	C	D	E	F	G	H	I	J	K
1	id	first_name	last_name	birthdate	gender	race	department	jobtitle	location	hire_date	termdate
2	00-0037846	Kimmy	Walczynski	06/04/1991	Male	Hispanic or Latino	Engineering	Programmer Analyst I	Headquarters	1/20/2002	
3	00-0041533	Ignatius	Springett	6/29/1984	Male	White	Business Development	Business Analyst	Headquarters	04/08/2019	
4	00-0045747	Corbie	Bittlestone	7/29/1989	Male	Black or African American	Sales	Solutions Engineer Manager	Headquarters	10/12/2010	
5	00-0055274	Baxy	Matton	9/14/1982	Female	White	Services	Service Tech	Headquarters	04/10/2005	
6	00-0076100	Terrell	Suff	04/11/1994	Female	Two or More Races	Product Management	Business Analyst	Remote	9/29/2010	2029-10-25
7	00-0116166	Kacie	Offiler	1/18/1971	Male	Asian	Engineering	Developer III	Headquarters	09/01/2018	
8	00-0363185	Sandro	Admans	11/19/1979	Male	Two or More Races	Product Management	Quality Engineer	Headquarters	11/08/2012	
9	00-0380704	Eugene	Lehman	10/14/1988	Female	Black or African American	Engineering	Developer I	Headquarters	6/27/2007	
10	00-0381660	Wainwright	Corfield	12/13/1996	Male	Asian	Engineering	Business Systems Development Analyst	Headquarters	2/20/2001	2008-12-05
11	00-0419202	Dyann	Isoldi	3/27/1980	Male	Two or More Races	Engineering	Web Developer I	Headquarters	1/27/2005	
12	00-0472287	Grantley	Oret	09/06/1975	Male	Two or More Races	Services	Service Tech II	Headquarters	11/01/2004	
13	00-0472832	Elmore	Worner	01/07/1966	Female	White	Engineering	Business Systems Development Analyst	Headquarters	12/05/2000	
14	00-0566380	Dud	Brain	3/17/1984	Male	Two or More Races	Business Development	Business Analyst	Headquarters	9/17/2008	
15	00-0571075	Aggie	Conford	11/02/1971	Male	White	Business Development	Research Assistant II	Headquarters	11/25/2015	
16	00-0624189	Katerina	Rosborough	8/20/1967	Female	Hispanic or Latino	Engineering	Analyst Programmer	Headquarters	5/17/2019	
17	00-0715212	Alida	Longley	1/28/1973	Female	American Indian or Alaska Native	Accounting	Staff Accountant III	Headquarters	02/04/2002	
18	00-0755645	Laraine	Petre	05/11/1967	Male	White	Engineering	Software Engineer I	Headquarters	9/30/2010	
19	00-0778934	Gareth	MacCook	2/21/1987	Female	Black or African American	Legal	Senior Attorney	Remote	2/18/2010	
20	00-0794247	Scottie	Chestney	2/23/1972	Female	Black or African American	Engineering	Data Visualization Specialist	Headquarters	07/03/2002	
21	00-0948136	Christophorus	Boseley	5/23/1983	Female	Two or More Races	Marketing	Senior Editor	Headquarters	09/06/2007	
22	00-0971612	Arienne	Froome	08/01/1999	Male	Two or More Races	Engineering	Software Consultant	Headquarters	04/09/2015	
23	00-1051096	Todd	Cashen	6/19/1999	Female	White	Accounting	Financial Analyst	Remote	6/20/2014	
24	00-1052230	Elmo	McNee	12/16/1988	Female	Black or African American	Services	Service Manager	Headquarters	7/18/2002	2006-05-22
25	00-1100714	Regen	Natzger	04/06/1990	Male	White	Human Resources	Senior Recruiter	Headquarters	7/23/2016	2022-07-12
26	00-1147503	Penelope	Wenman	12/19/1994	Male	White	Business Development	Research Assistant II	Headquarters	09/10/2019	
27	00-1189819	Rudolf	Reichardt	06/05/1979	Male	Black or African American	Business Development	Business Analyst	Remote	05/07/2007	2022-02-25
28	00-1222963	Tobiah	Fruchon	10/17/1991	Female	Asian	Services	Service Tech II	Headquarters	2/13/2011	
29	00-1268049	Fay	Monnelly	07/09/1966	Male	Native Hawaiian or Other Pacific Islander	Engineering	Software Engineer I	Headquarters	2/24/2010	2030-03-21

The id, first_name, last_name, birthdate, hire_date, termdate columns are not really something to check since there are countless possibilities for them. Instead, there's need check the rest. Starting off with gender. This is done by clicking on the drop down arrow in the gender header cell:

id	first_name	last_name	birthdate	gender	race	department	jobtitle	location	hire_date	termdate
00-0037846	Kimmy	Walczynski	06/04/1991	Male	Hispanic or Latino	Engineering	Programmer Analyst I	Headquarters	1/20/2002	
00-0041533	Ignatius	Springett	6/29/1984	Male	White	Business Development	Business Analyst	Headquarters	04/08/2019	
00-0045747	Corbie	Bittestone	7/29/1989	Male	Black or African American	Sales	Solutions Engineer Manager	Headquarters	10/12/2010	
00-0055274	Baxy	Motton	9/14/1982	Female	White	Services	Service Tech	Headquarters	04/10/2005	
00-0076100	Terrell	Suff	04/11/1994	Female	Two or More Races	Product Management	Business Analyst	Remote	9/29/2010	2029-10-29 06:09:38 UTC
00-0116166	Kacie	Offiler	1/18/1971	Male	Asian	Engineering	Developer III	Headquarters	09/01/2018	
00-0363185	Sandro	Admans	11/19/1979	Male	Two or More Races	Product Management	Quality Engineer	Headquarters	11/08/2012	
00-0380704	Eugene	Lehran	10/14/1988	Female	Black or African American	Engineering	Developer I	Headquarters	6/27/2007	
00-0381660	Wainwright	Corfield	12/13/1996	Male	Asian	Engineering	Business Systems Development Analyst	Headquarters	2/20/2001	2008-12-05 01:21:48 UTC
00-0419202	Dynn	Isodi	3/27/1980	Male	Two or More Races	Engineering	Web Developer I	Headquarters	1/27/2005	
00-0472287	Grantley	Oret	09/06/1975	Male	Two or More Races	Services	Service Tech II	Headquarters	11/01/2004	
00-0472832	Elmore	Worner	01/07/1966	Female	White	Engineering	Business Systems Development Analyst	Headquarters	12/05/2000	
00-0566380	Dud	Brain	3/17/1984	Male	Two or More Races	Business Development	Business Analyst	Headquarters	9/17/2008	
00-0571075	Aguie	Conford	11/02/1971	Male	White	Business Development	Research Assistant II	Headquarters	11/25/2015	
00-0624189	Katerina	Rosborough	8/20/1967	Male	Hispanic or Latino	Engineering	Analyst Programmer	Headquarters	5/17/2019	
00-0715212	Alida	Longley	1/28/1973	Female	American Indian or Alaska Native	Accounting	Staff Accountant III	Headquarters	02/04/2002	
00-0755645	Laraine	Petre	05/11/1967	Female	White	Engineering	Software Engineer I	Headquarters	9/30/2010	
00-0778934	Gareth	MacCook	2/21/1987	Female	Black or African American	Legal	Senior Attorney	Remote	2/18/2010	
00-0794247	Scottie	Chestney	2/23/1972	Female	Black or African American	Engineering	Data Visualization Specialist	Headquarters	07/03/2002	
00-0948136	Christophorus	Boseley	5/23/1983	Female	Two or More Races	Marketing	Senior Editor	Headquarters	09/06/2007	
00-0971612	Arleyne	Froome	08/01/1999	Female	Two or More Races	Engineering	Software Consultant	Headquarters	04/09/2015	
00-1051096	Todd	Cashen	6/19/1999	Female	White	Accounting	Financial Analyst	Remote	6/20/2014	
00-1052230	Elmo	McNee	12/16/1988	Female	Black or African American	Services	Service Manager	Headquarters	7/18/2002	2006-05-22 20:14:26 UTC
00-1100714	Regen	Nafzger	04/06/1990	Male	White	Human Resources	Senior Recruiter	Headquarters	7/23/2016	2022-07-12 02:26:01 UTC
00-1147503	Penelope	Wenman	12/19/1994	Male	Two or More Races	Business Development	Research Assistant II	Headquarters	09/10/2019	
00-1189819	Rudolf	Reichardt	06/05/1979	Male	Black or African American	Business Development	Business Analyst	Remote	05/07/2007	2022-02-25 03:21:03 UTC
00-1222963	Tobiah	Fruchon	10/17/1991	Female	Asian	Services	Service Tech II	Headquarters	2/13/2011	
00-1268049	Fay	Monnelly	07/09/1966	Male	Native Hawaiian or Other Pacific Islander	Engineering	Software Engineer I	Headquarters	2/24/2010	2030-03-21 03:56:25 UTC

As can be seen, the only possibilities for this column are [Female, Male, Non-Conforming]. That's good to see because sometimes files have a column with mixed words for example, using both 'F' and 'Female' to describe the same thing, in that case I would've chose one format and changed the other so it would be uniform. Ok now that this column is good, the race column needs to be checked:

id	first_name	last_name	birthdate	gender	race	department	jobtitle	location	hire_date	termdate
00-0037846	Kimmy	Walczynski	06/04/1991	Male	Hispanic or Latino	Engineering	Programmer Analyst I	Headquarters	1/20/2002	
00-0041533	Ignatius	Springett	6/29/1984	Male	White	Business Development	Business Analyst	Headquarters	04/08/2019	
00-0045747	Corbie	Bittestone	7/29/1989	Male	Black or African American	Sales	Solutions Engineer Manager	Headquarters	10/12/2010	
00-0055274	Baxy	Motton	9/14/1982	Female	White	Services	Service Tech	Headquarters	04/10/2005	
00-0076100	Terrell	Suff	04/11/1994	Female	Two or More Races	Product Management	Business Analyst	Remote	9/29/2010	2029-10-29 06:09:38 UTC
00-0116166	Kacie	Offiler	1/18/1971	Male	Asian	Engineering	Developer III	Headquarters	09/01/2018	
00-0363185	Sandro	Admans	11/19/1979	Male	Two or More Races	Product Management	Quality Engineer	Headquarters	11/08/2012	
00-0380704	Eugene	Lehran	10/14/1988	Female	Black or African American	Engineering	Developer I	Headquarters	6/27/2007	
00-0381660	Wainwright	Corfield	12/13/1996	Male	Asian	Engineering	Business Systems Development Analyst	Headquarters	2/20/2001	2008-12-05 01:21:48 UTC
00-0419202	Dynn	Isodi	3/27/1980	Male	Two or More Races	Engineering	Web Developer I	Headquarters	1/27/2005	
00-0472287	Grantley	Oret	09/06/1975	Male	Two or More Races	Services	Service Tech II	Headquarters	11/01/2004	
00-0472832	Elmore	Worner	01/07/1966	Female	White	Engineering	Business Systems Development Analyst	Headquarters	12/05/2000	
00-0566380	Dud	Brain	3/17/1984	Male	Two or More Races	Business Development	Business Analyst	Headquarters	9/17/2008	
00-0571075	Aguie	Conford	11/02/1971	Male	White	Business Development	Research Assistant II	Headquarters	11/25/2015	
00-0624189	Katerina	Rosborough	8/20/1967	Male	Hispanic or Latino	Engineering	Analyst Programmer	Headquarters	5/17/2019	
00-0715212	Alida	Longley	1/28/1973	Female	American Indian or Alaska Native	Accounting	Staff Accountant III	Headquarters	02/04/2002	
00-0755645	Laraine	Petre	05/11/1967	Female	White	Engineering	Software Engineer I	Headquarters	9/30/2010	
00-0778934	Gareth	MacCook	2/21/1987	Female	Black or African American	Legal	Senior Attorney	Remote	2/18/2010	
00-0794247	Scottie	Chestney	2/23/1972	Female	Black or African American	Engineering	Data Visualization Specialist	Headquarters	07/03/2002	
00-0948136	Christophorus	Boseley	5/23/1983	Female	Two or More Races	Marketing	Senior Editor	Headquarters	09/06/2007	
00-0971612	Arleyne	Froome	08/01/1999	Female	Two or More Races	Engineering	Software Consultant	Headquarters	04/09/2015	
00-1051096	Todd	Cashen	6/19/1999	Female	White	Accounting	Financial Analyst	Remote	6/20/2014	
00-1052230	Elmo	McNee	12/16/1988	Female	Black or African American	Services	Service Manager	Headquarters	7/18/2002	2006-05-22 20:14:26 UTC
00-1100714	Regen	Nafzger	04/06/1990	Male	White	Human Resources	Senior Recruiter	Headquarters	7/23/2016	2022-07-12 02:26:01 UTC
00-1147503	Penelope	Wenman	12/19/1994	Male	Two or More Races	Business Development	Research Assistant II	Headquarters	09/10/2019	
00-1189819	Rudolf	Reichardt	06/05/1979	Male	Black or African American	Business Development	Business Analyst	Remote	05/07/2007	2022-02-25 03:21:03 UTC
00-1222963	Tobiah	Fruchon	10/17/1991	Female	Asian	Services	Service Tech II	Headquarters	2/13/2011	
00-1268049	Fay	Monnelly	07/09/1966	Male	Native Hawaiian or Other Pacific Islander	Engineering	Software Engineer I	Headquarters	2/24/2010	2030-03-21 03:56:25 UTC

This column has only 7 possibilities as can be seen above. That looks good, the next column to review is the department column.

ID	first_name	last_name	birthdate	gender	race	department	jobtitle	location	hire_date	termdate
00-0037846	Kimmy	Walczynski	06/04/1991	Male	Hispanic or Latino	Engineering	Programmer Analyst I	Headquarters	1/20/2002	
00-0041533	Ignatius	Springett	6/29/1984	Male	White	Engineering	Business Analyst	Headquarters	04/08/2019	
00-0045747	Corbie	Bittlesone	7/29/1989	Male	Black or African American	Engineering	Solutions Engineer Manager	Headquarters	10/12/2010	
00-0055274	Baxy	Matton	9/14/1982	Female	White	Engineering	Service Tech	Headquarters	04/10/2005	
00-0076100	Terrell	Suff	04/11/1994	Female	Two or More Races	Engineering	Business Analyst	Remote	9/29/2010	2029-10-29 06:09:38 UTC
00-0116166	Kacie	Offiler	1/18/1971	Male	Asian	Engineering	Developer III	Headquarters	09/01/2018	
00-0363185	Sandro	Admans	11/19/1979	Male	Two or More Races	Engineering	Quality Engineer	Headquarters	11/08/2012	
00-0380704	Eugene	Lehraham	10/14/1988	Female	Black or African American	Engineering	Developer I	Headquarters	6/27/2007	
00-0381660	Wainwright	Corfield	12/13/1996	Male	Asian	Engineering	Business Systems Development Analyst	Headquarters	2/20/2001	2008-12-05 01:21:48 UTC
00-0419202	Dyann	Isoldi	3/27/1980	Male	Two or More Races	Engineering	Web Developer I	Headquarters	1/27/2005	
00-0472287	Grantley	Oret	09/06/1975	Male	Two or More Races	Engineering	Service Tech II	Headquarters	11/01/2004	
00-0472832	Elmore	Wornor	01/07/1966	Female	White	Engineering	Business Systems Development Analyst	Headquarters	12/05/2000	
00-0566380	Dud	Brain	3/17/1984	Male	Two or More Races	Engineering	Business Analyst	Headquarters	9/17/2008	
00-0571075	Agulie	Conford	11/02/1971	Male	White	Engineering	Research Assistant II	Headquarters	11/25/2015	
00-0624189	Katerina	Rosborough	8/20/1967	Male	Hispanic or Latino	Engineering	Analyst Programmer	Headquarters	5/17/2019	
00-0715212	Alida	Longley	1/28/1973	Female	American Indian or Alaska Native	Engineering	Staff Accountant III	Headquarters	02/04/2002	
00-0755645	Laraine	Petre	05/11/1967	Male	White	Engineering	Software Engineer I	Headquarters	9/30/2010	
00-0778934	Gareth	MacCook	2/21/1987	Female	Black or African American	Engineering	Senior Attorney	Remote	2/18/2010	
00-0794247	Scottie	Chestney	2/23/1972	Female	Black or African American	Engineering	Data Visualization Specialist	Headquarters	07/03/2002	
00-0948136	Christophorus	Boseley	5/23/1983	Female	Two or More Races	Engineering	Senior Editor	Headquarters	09/06/2007	
00-0971612	Arlayne	Froome	08/01/1999	Female	Two or More Races	Engineering	Software Consultant	Headquarters	04/09/2015	
00-1051096	Todd	Cashen	6/19/1999	Female	White	Engineering	Financial Analyst	Remote	6/20/2014	
00-1052230	Elmo	McNee	12/16/1988	Female	Black or African American	Engineering	Service Manager	Headquarters	7/18/2002	2006-05-22 20:14:26 UTC
00-1100714	Regen	Nafzger	04/06/1990	Male	White	Engineering	Senior Recruiter	Headquarters	7/23/2016	2022-07-12 02:26:01 UTC
00-1147503	Penelope	Wenman	12/19/1994	Male	White	Engineering	Research Assistant II	Headquarters	09/10/2019	
00-1189819	Rudolf	Reichardt	06/05/1979	Male	Black or African American	Engineering	Business Analyst	Remote	05/07/2007	2022-02-25 03:21:03 UTC
00-1222963	Tobiah	Fruchon	10/17/1991	Female	Asian	Engineering	Service Tech II	Headquarters	2/13/2011	
00-1268049	Fay	Monnelly	07/09/1966	Male	Native Hawaiian or Other Pacific Islander	Engineering	Software Engineer I	Headquarters	2/24/2010	2030-03-21 03:56:25 UTC

This column has 13 possibilities as can be seen above. Next up is the job title column.

ID	first_name	last_name	birthdate	gender	race	department	jobtitle	location	hire_date	termdate
00-0037846	Kimmy	Walczynski	06/04/1991	Male	Hispanic or Latino	Eng	Programmer Analyst I	Headquarters	1/20/2002	
00-0041533	Ignatius	Springett	6/29/1984	Male	White	Bus	Business Analyst	Headquarters	04/08/2019	
00-0045747	Corbie	Bittlesone	7/29/1989	Male	Black or African American	Sa	Solutions Engineer Manager	Headquarters	10/12/2010	
00-0055274	Baxy	Matton	9/14/1982	Female	White	Ser	Service Tech	Headquarters	04/10/2005	
00-0076100	Terrell	Suff	04/11/1994	Female	Two or More Races	Pro	Business Analyst	Remote	9/29/2010	2029-10-29 06:09:38 UTC
00-0116166	Kacie	Offiler	1/18/1971	Male	Asian	Eng	Developer III	Headquarters	09/01/2018	
00-0363185	Sandro	Admans	11/19/1979	Male	Two or More Races	Pro	Quality Engineer	Headquarters	11/08/2012	
00-0380704	Eugene	Lehraham	10/14/1988	Female	Black or African American	Eng	Developer I	Headquarters	6/27/2007	
00-0381660	Wainwright	Corfield	12/13/1996	Male	Asian	Eng	Business Systems Development Analyst	Headquarters	2/20/2001	2008-12-05 01:21:48 UTC
00-0419202	Dyann	Isoldi	3/27/1980	Male	Two or More Races	Eng	Web Developer I	Headquarters	1/27/2005	
00-0472287	Grantley	Oret	09/06/1975	Male	Two or More Races	Ser	Service Tech II	Headquarters	11/01/2004	
00-0472832	Elmore	Wornor	01/07/1966	Female	White	Eng	Business Systems Development Analyst	Headquarters	12/05/2000	
00-0566380	Dud	Brain	3/17/1984	Male	Two or More Races	Bus	Business Analyst	Headquarters	9/17/2008	
00-0571075	Agulie	Conford	11/02/1971	Male	White	Bus	Research Assistant II	Headquarters	11/25/2015	
00-0624189	Katerina	Rosborough	8/20/1967	Male	Hispanic or Latino	Eng	Analyst Programmer	Headquarters	5/17/2019	
00-0715212	Alida	Longley	1/28/1973	Female	American Indian or Alaska Native	Acc	Staff Accountant III	Headquarters	02/04/2002	
00-0755645	Laraine	Petre	05/11/1967	Male	White	Eng	Software Engineer I	Headquarters	9/30/2010	
00-0778934	Gareth	MacCook	2/21/1987	Female	Black or African American	Eng	Senior Attorney	Remote	2/18/2010	
00-0794247	Scottie	Chestney	2/23/1972	Female	Black or African American	Eng	Data Visualization Specialist	Headquarters	07/03/2002	
00-0948136	Christophorus	Boseley	5/23/1983	Female	Two or More Races	Ma	Senior Editor	Headquarters	09/06/2007	
00-0971612	Arlayne	Froome	08/01/1999	Female	Two or More Races	Eng	Software Consultant	Headquarters	04/09/2015	
00-1051096	Todd	Cashen	6/19/1999	Female	White	Acc	Financial Analyst	Remote	6/20/2014	
00-1052230	Elmo	McNee	12/16/1988	Female	Black or African American	Ser	Service Manager	Headquarters	7/18/2002	2006-05-22 20:14:26 UTC
00-1100714	Regen	Nafzger	04/06/1990	Male	White	Hui	Senior Recruiter	Headquarters	7/23/2016	2022-07-12 02:26:01 UTC
00-1147503	Penelope	Wenman	12/19/1994	Male	White	Bus	Research Assistant II	Headquarters	09/10/2019	
00-1189819	Rudolf	Reichardt	06/05/1979	Male	Black or African American	Business Development	Business Analyst	Remote	05/07/2007	2022-02-25 03:21:03 UTC
00-1222963	Tobiah	Fruchon	10/17/1991	Female	Asian	Services	Service Tech II	Headquarters	2/13/2011	
00-1268049	Fay	Monnelly	07/09/1966	Male	Native Hawaiian or Other Pacific Islander	Engineering	Software Engineer I	Headquarters	2/24/2010	2030-03-21 03:56:25 UTC

This column has 185 possibilities, this data was obtained by using the function below $=\text{SUMPRODUCT}(1/\text{COUNTIF}(I2:I22215, I2:I22215))$. Next up, the location column is checked.

H15

<

The location column has 2 possibilities. Thereafter, the location_city column is reviewed.

H15

<

The location_city has 77 possibilities and this was obtained using the formula: =SUMPRODUCT(1/COUNTIF(L2:L22215, L2:L22215)). Lastly, the location_state column has to be reviewed.

	F	G	H	I	J	K	L	M	N	O
1	race	department	jobtitle	location	hire_date	termdate	location_city	location_state		
2	Hispanic or Latino	Engineering	Programmer Analyst I	Headquarters	1/20/2002					
3	White	Business Development	Business Analyst	Headquarters	04/08/2019					
4	Black or African American	Sales	Solutions Engineer Manager	Headquarters	10/12/2010					
5	White	Services	Service Tech	Headquarters	04/10/2005					
6	Two or More Races	Product Management	Business Analyst	Remote	9/29/2010	2029-10-29 06:09:3				
7	Asian	Engineering	Developer III	Headquarters	09/01/2018					
8	Two or More Races	Product Management	Quality Engineer	Headquarters	11/08/2012					
9	Black or African American	Engineering	Developer I	Headquarters	6/27/2007					
10	Asian	Engineering	Business Systems Development Analyst	Headquarters	2/20/2001	2008-12-05 01:21:4				
11	Two or More Races	Engineering	Web Developer I	Headquarters	1/27/2005					
12	Two or More Races	Services	Service Tech II	Headquarters	11/01/2004					
13	White	Engineering	Business Systems Development Analyst	Headquarters	12/05/2000					
14	Two or More Races	Business Development	Business Analyst	Headquarters	9/17/2008					
15	White	Business Development	Research Assistant II	Headquarters	11/25/2015					
16	Hispanic or Latino	Engineering	Analyst Programmer	Headquarters	5/17/2019					
17	American Indian or Alaska Native	Accounting	Staff Accountant III	Headquarters	02/04/2002					
18	White	Engineering	Software Engineer I	Headquarters	9/30/2010					
19	Black or African American	Legal	Senior Attorney	Remote	2/18/2010					
20	Black or African American	Engineering	Data Visualization Specialist	Headquarters	07/03/2002					
21	Two or More Races	Marketing	Senior Editor	Headquarters	09/06/2007					
22	Two or More Races	Engineering	Software Consultant	Headquarters	04/09/2015					
23	White	Accounting	Financial Analyst	Remote	6/20/2014					
24	Black or African American	Services	Service Manager	Headquarters	7/18/2002	2006-05-22 20:14:2				
25	White	Human Resources	Senior Recruiter	Headquarters	7/23/2016	2022-07-12 02:26:0				
26	White	Business Development	Research Assistant II	Headquarters	09/10/2019					
27	Black or African American	Business Development	Business Analyst	Remote	05/07/2007	2022-02-25 03:21:03 UTC	Philadelphia	Pennsylvania		
28	Asian	Services	Service Tech II	Headquarters	2/13/2011	2030-03-21 03:56:25 UTC	Cleveland	Ohio		
29	Native Hawaiian or Other Pacific Islander	Engineering	Software Engineer I	Headquarters	2/24/2010		Cleveland	Ohio		

The location_state has 7 possibilities obtained using the formula below:
`=SUMPRODUCT(1/COUNTIF(M2:M22215, M2:M22215))`

Part 2: Data Preparation and Cleaning

Step 1: Change the date format from mm/dd/yyyy to dd/mm/yyyy.

The first thing to do is to select the portion of column D (birthdate) and column J (hire_date) containing data. This is done by using the keyboard shortcut. Ctrl + Shift + Down Arrow. Next, click on the Data tab > Text to columns > Keep the delimited option checked > Next > Remove the checks, all of them > Click on Date > MDY > finish.

	A	B	C	D	E
1	id	first_name	last_name	birthdate	gender
2	00-0037846	Kimmy	Walczynski	04/06/1991	Male
3	00-0041533	Ignatius	Springett	29/06/1984	Male
4	00-0045747	Corbie	Bittlstone	29/07/1989	Male
5	00-0055274	Baxy	Matton	14/09/1982	Female
6	00-0076100	Terrell	Suff	11/04/1994	Female
7	00-0116166	Kacie	Offiler	18/01/1971	Male
8	00-0363185	Sandro	Admans	19/11/1979	Male
9	00-0380704	Eugene	Lehraham	14/10/1988	Female
10	00-0381660	Wainwright	Corfield	13/12/1996	Male
11	00-0419202	Dyann	Isoldi	27/03/1980	Male
12	00-0472287	Grantley	Oret	06/09/1975	Male
13	00-0472832	Elmore	Worner	07/01/1966	Female
14	00-0566380	Dud	Brain	17/03/1984	Male
15	00-0571075	Aguie	Conford	02/11/1971	Male
16	00-0624189	Katerina	Rosborough	20/08/1967	Male
17	00-0715212	Alida	Longley	28/01/1973	Female
18	00-0755645	Laraine	Petre	11/05/1967	Male
19	00-0778934	Gareth	MacCook	21/02/1987	Female
20	00-0794247	Scottie	Chestney	23/02/1972	Female
21	00-0948136	Christophorus	Boseley	23/05/1983	Female
22	00-0971612	Arleyne	Froome	01/08/1999	Male
23	00-1051096	Todd	Cashen	19/06/1999	Female
24	00-1052230	Elmo	McNee	16/12/1988	Female
25	00-1100714	Regen	Nafzger	06/04/1990	Male
26	00-1147503	Penelope	Wenman	19/12/1994	Male
27	00-1189819	Rudolf	Reichardt	05/06/1979	Male
28	00-1222963	Tobiah	Fruchon	17/10/1991	Female
29	00-1268049	Fay	Monnelly	09/07/1966	Male

	I	J	K
	location	hire_date	termdate
	Headquarters	20/01/2002	
	Headquarters	08/04/2019	
	Headquarters	12/10/2010	
	Headquarters	10/04/2005	
	Remote	29/09/2010	2029-10-29 06:0
	Headquarters	01/09/2018	
	Headquarters	08/11/2012	
	Headquarters	27/06/2007	
Analyst	Headquarters	20/02/2001	2008-12-05 01:2
	Headquarters	27/01/2005	
	Headquarters	01/11/2004	
Analyst	Headquarters	05/12/2000	
	Headquarters	17/09/2008	
	Headquarters	25/11/2015	
	Headquarters	17/05/2019	
	Headquarters	04/02/2002	
	Headquarters	30/09/2010	
	Remote	18/02/2010	
	Headquarters	03/07/2002	
	Headquarters	06/09/2007	
	Headquarters	09/04/2015	
	Remote	20/06/2014	
	Headquarters	18/07/2002	2006-05-22 20:1
	Headquarters	23/07/2016	2022-07-12 02:2
	Headquarters	10/09/2019	
	Remote	07/05/2007	2022-02-25 03:2
	Headquarters	13/02/2011	
	Headquarters	24/02/2010	2030-03-21 03:5

Step 2: Insert a column titled 'age' next to the 'birthdate' column. This column will be used to determine the age ranges of the employees.

B	C	D	E	F
first_name	last_name	birthdate	age	gender
Kimmy	Walczynski	04/06/1991		Male
Ignatius	Springett	29/06/1984		Male
Corbie	Bittlestone	29/07/1989		Male
Baxy	Matton	14/09/1982		Female
Terrell	Suff	11/04/1994		Female
Kacie	Offiler	18/01/1971		Male
Sandro	Admans	19/11/1979		Male
Eugene	Lehraphan	14/10/1988		Female
Wainwright	Corfield	13/12/1996		Male
Dyann	Isoldi	27/03/1980		Male
Grantley	Oret	06/09/1975		Male
Elmore	Worner	07/01/1966		Female
Dud	Brain	17/03/1984		Male
Ague	Conford	02/11/1971		Male
Katerina	Rosborough	20/08/1967		Male
Alida	Longley	28/01/1973		Female
Laraine	Petre	11/05/1967		Male
Gareth	MacCook	21/02/1987		Female
Scottie	Chestney	23/02/1972		Female
Christophorus	Boseley	23/05/1983		Female
Arleyne	Froome	01/08/1999		Male
Todd	Cashen	19/06/1999		Female
Elmo	McNee	16/12/1988		Female
Regen	Nafzger	06/04/1990		Male
Penelope	Wenman	19/12/1994		Male
Rudolf	Reichardt	05/06/1979		Male
Tobiah	Fruchon	17/10/1991		Female
Fay	Monnelly	09/07/1966		Male
Human Resources				

To populate the column, a formula to calculate the age of the person based on their birthdate is used. The following formula `=INT(YEARFRAC(D2,TODAY()))` is entered in cell E2.

Hover the mouse pointer over the drag handle of cell E2 and double click when the little plus sign appears, it would fill the values for the rest of the rows.

B	C	D	E	F
first_name	last_name	birthdate	age	gender
Kimmy	Walczynski	04/06/1991	32	Male
Ignatius	Springett	29/06/1984	39	Male
Corbie	Bittlestone	29/07/1989	34	Male
Baxy	Matton	14/09/1982	41	Female
Terrell	Suff	11/04/1994	29	Female
Kacie	Offiler	18/01/1971	52	Male
Sandro	Admans	19/11/1979	43	Male
Eugene	Lehraphan	14/10/1988	34	Female
Wainwright	Corfield	13/12/1996	26	Male
Dyann	Isoldi	27/03/1980	43	Male
Grantley	Oret	06/09/1975	48	Male
Elmore	Worner	07/01/1966	57	Female
Dud	Brain	17/03/1984	39	Male
Ague	Conford	02/11/1971	51	Male
Katerina	Rosborough	20/08/1967	56	Male
Alida	Longley	28/01/1973	50	Female
Laraine	Petre	11/05/1967	56	Male
Gareth	MacCook	21/02/1987	36	Female
Scottie	Chestney	23/02/1972	51	Female
Christophorus	Boseley	23/05/1983	40	Female
Arleyne	Froome	01/08/1999	24	Male
Todd	Cashen	19/06/1999	24	Female
Elmo	McNee	16/12/1988	34	Female
Regen	Nafzger	06/04/1990	33	Male
Penelope	Wenman	19/12/1994	28	Male
Rudolf	Reichardt	05/06/1979	44	Male
Tobiah	Fruchon	17/10/1991	31	Female
Fay	Monnelly	09/07/1966	57	Male
Human Resources				

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Step 3: Embolden and convert the first letter of the column headings to uppercase e.g. 'age' becomes '**Age**', this is done to make the headings more legible.

	A	B	C	D	E	F	G
1	ID	First_Name	Last_Name	Birth_Date	Age	Gender	Race
2	00-0037846	Kimmy	Walczynski	04/06/1991	32	Male	Hispanic or Latino
3	00-0041533	Ignatius	Springett	29/06/1984	39	Male	White
4	00-0045747	Corbie	Bittlestone	29/07/1989	34	Male	Black or African American
5	00-0055274	Baxy	Matton	14/09/1982	41	Female	White
6	00-0076100	Terrell	Suff	11/04/1994	29	Female	Two or More Races
7	00-0116166	Kacie	Offler	18/01/1971	52	Male	Asian
8	00-0363185	Sandro	Admans	19/11/1979	43	Male	Two or More Races
9	00-0380704	Eugene	Lehraham	14/10/1988	34	Female	Black or African American
10	00-0381660	Wainwright	Corfield	13/12/1996	26	Male	Asian
11	00-0419202	Dyann	Isoldi	27/03/1980	43	Male	Two or More Races
12	00-0472287	Grantley	Oret	06/09/1975	48	Male	Two or More Races
13	00-0472832	Elmore	Worner	07/01/1966	57	Female	White
14	00-0566380	Dud	Brain	17/03/1984	39	Male	Two or More Races
15	00-0571075	Aggie	Conford	02/11/1971	51	Male	White
16	00-0624189	Katerina	Rosborough	20/08/1967	56	Male	Hispanic or Latino
17	00-0715212	Alida	Longley	28/01/1973	50	Female	American Indian or Alaska Native
18	00-0755645	Laraine	Petre	11/05/1967	56	Male	White
19	00-0778934	Gareth	MacCook	21/02/1987	36	Female	Black or African American
20	00-0794247	Scottie	Chestney	23/02/1972	51	Female	Black or African American
21	00-0948136	Christophorus	Boseley	23/05/1983	40	Female	Two or More Races
22	00-0971612	Arlayne	Froome	01/08/1999	24	Male	Two or More Races
23	00-1051096	Todd	Cashen	19/06/1999	24	Female	White
24	00-1052230	Elmo	McNee	16/12/1988	34	Female	Black or African American
25	00-1100714	Regen	Nafzger	06/04/1990	33	Male	White
26	00-1147503	Penelope	Wenman	19/12/1994	28	Male	White
27	00-1189819	Rudolf	Reichardt	05/06/1979	44	Male	Black or African American
28	00-1222963	Tobiah	Fruchon	17/10/1991	31	Female	Asian
29	00-1268049	Fay	Monnelly	09/07/1966	57	Male	Native Hawaiian or Other Pacific Islander
30	00-1277358	Lola	Burrells	02/10/1973	50	Male	Black or African American
31	00-1284831	Hamel	Edneler	22/12/1973	49	Male	Two or More Races

That's it for preparing the data.

Part 3: Data Visualization using Pivot Tables and build Charts.

In this step I will build my charts and Pivot tables that I will later use in the dashboard. Out of convenience, each of the charts will be created in a separate tab to keep things tidy.

Now what are the elements I want to incorporate in my dashboard:

1. 3 KPIs that list the number of employees, percent of workers working remotely and in HQ and the average age.
2. Line chart showing the hiring rate by Year.
3. Doughnut chart representing the gender of employees.
4. 3 Bar charts showing employees by State, By Department & By Race.
5. We will also add slicers to filter our data depending on our choices.

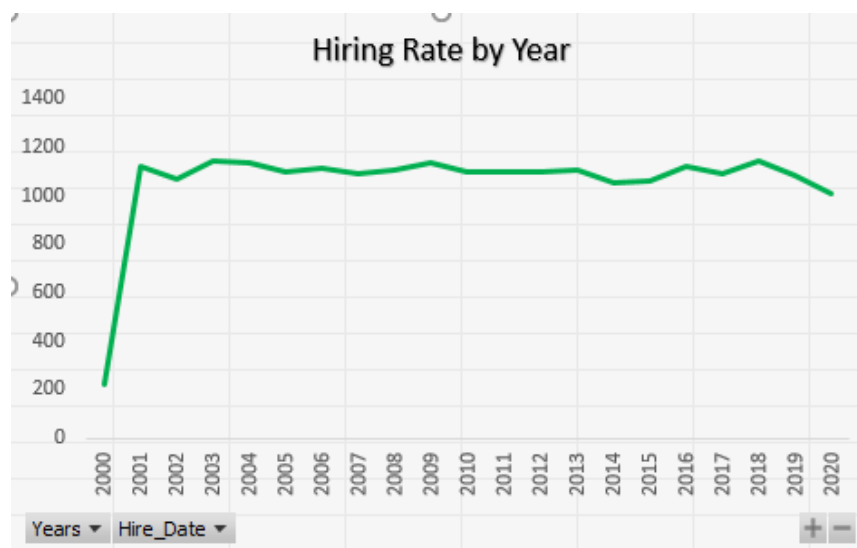
Step 1: The 3 KPI's:

First off, a new sheet was opened and named KPI, now there's a need to get a count of employees, location percent and average age.

	A	B	C	D	E	F	G	H
1								
2	Count of ID		Row Labels	Count of ID	Count of ID2		Average of Age	
3	22214		Headquarters	16715	75%		39	
4			Remote	5499	25%			
5			Grand Total	22214	100%			
6								

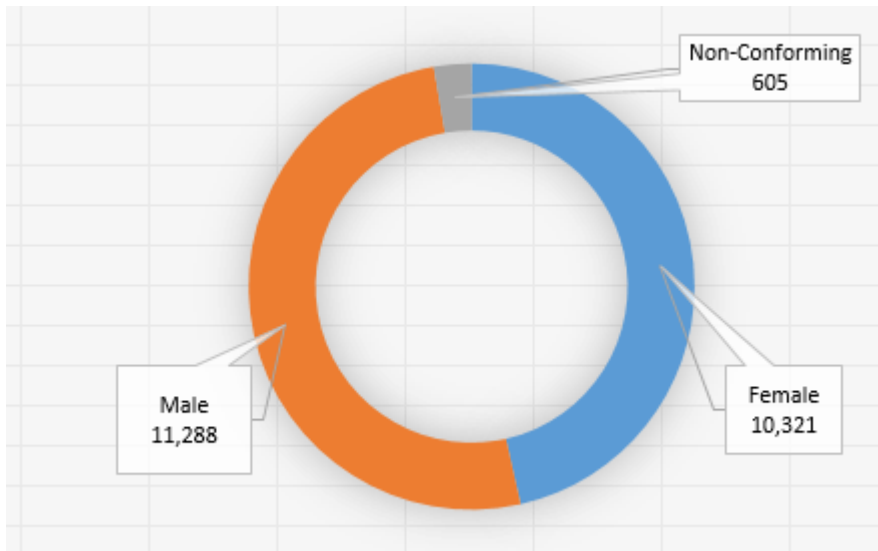
Step 2: Hiring Rate by Year:

A new worksheet named 'Line Chart' is created, this is where the Line Chart Pivot Table and Chart will be placed.

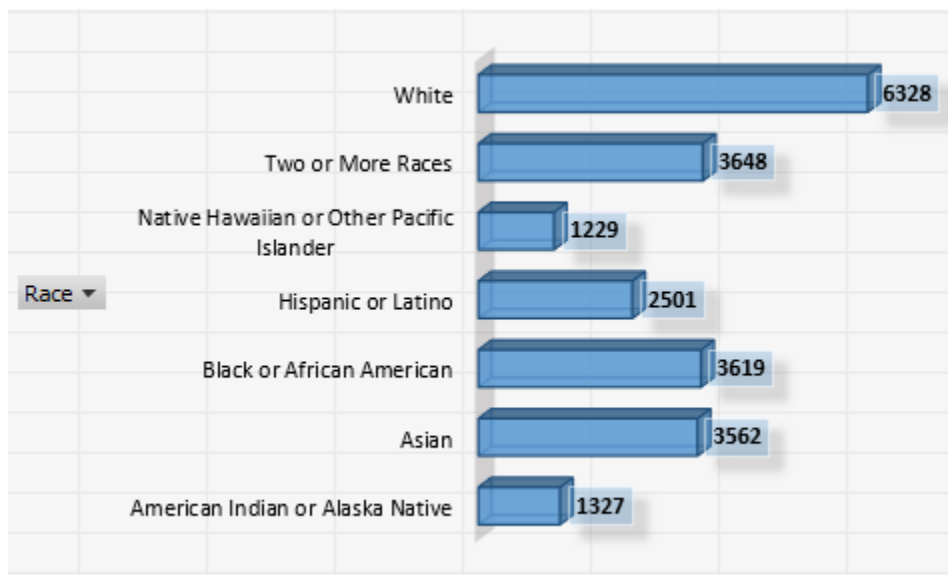


Step 3: Employees by Gender:

A new worksheet named 'Doughnut Chart' is created, this is where the Doughnut Chart Pivot Table and Chart will be placed.

**Step 4: Employees by Race:**

A new worksheet named 'Bar Chart' is created, this is where the Bar Chart Pivot Table and Chart will be placed.

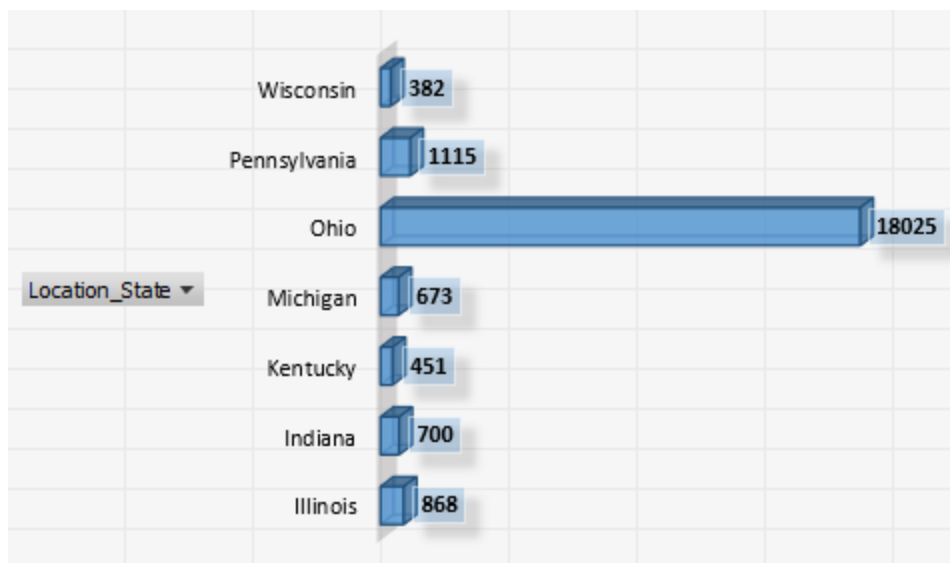


Step 4: Employees by Department:

A new worksheet named 'Department Bar Chart' is created, this is where the Bar Chart Pivot Table and Chart will be placed.

**Step 5: Employees by State:**

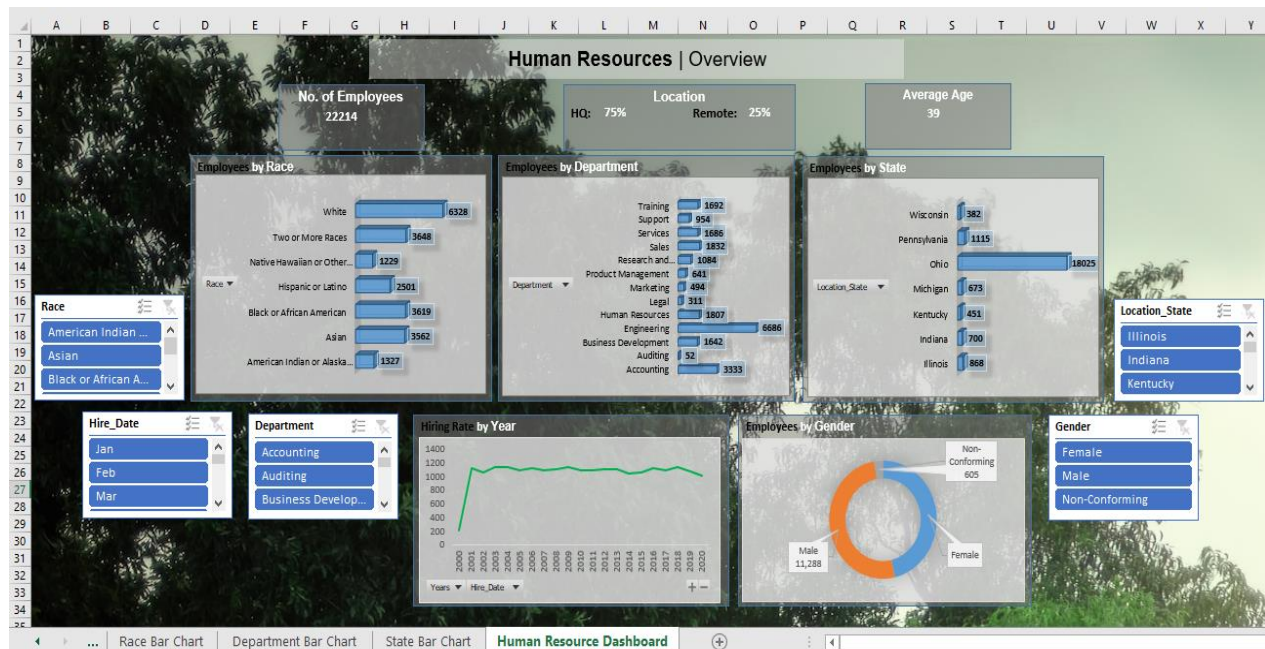
A new worksheet named 'State Bar Chart' is created, this is where the Bar Chart Pivot Table and Chart will be placed.



Step 5: Creating a dashboard. A new tab, 'Human Resources Dashboard' is created.



Step 6: Insert slicers to filter data and the dashboard is complete.



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