

SECTION NUMBER: BUAN 6329.005

DATABASE FOUNDATIONS
FOR BUSINESS ANALYTICS

GROUP 15

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H-1B Visa Petitions 2011-2016

Dataset Link: <https://www.kaggle.com/datasets/nsharan/h-1b-visa>

Content of the dataset

H-1B visas are a category of employment-based, non-immigrant visas for temporary foreign workers in the United States. For a foreign national to apply for H1-B visa, a US employer must offer them a job and submit a petition for a H-1B visa to the US immigration department. This is also the most common visa status applied for and held by international students once they complete college or higher education and begin working in a full-time position. This dataset contains five years' worth of H-1B petition data, with approximately 3 million records overall. The columns in the dataset include case status, employer name, worksite coordinates, job title, prevailing wage, occupation code, and year filed.

Business objective

The business objective of the H1B Visa Petition dataset can vary depending on the company or organization using it. However, some potential business objectives of analyzing this dataset could be:

- a) **Talent Acquisition:** Companies can use the dataset to identify trends in H1B visa approvals and understand which industries, job positions, and geographic locations have the highest demand for foreign workers. This information can help them make informed decisions about hiring and recruiting international talent.
- b) **Compliance:** Organizations that sponsor H1B visas can use the dataset to ensure that their visa applications are in line with the prevailing wage requirements and other regulations. This can help them avoid potential penalties or legal issues.
- c) **Competitive Intelligence:** Companies can use the dataset to analyze their competitors' H1B visa practices and understand their talent strategies. This can help them identify opportunities for differentiation and improve their own recruiting and hiring practices.
- d) **Market Research:** Companies can use the dataset to gain insights into the labor market and industry trends. This information can be used to inform business strategy and decision making.

Overall, the H1B Visa Petition dataset can provide valuable information for companies and organizations looking to hire or sponsor foreign workers, stay compliant with regulations, and gain insights into the labor market.

Project Insights Identified

Through our analysis of the H1B Visa Petition dataset, we have identified 10 key insights that shed light on various aspects of the H1B visa application process, including approval

rates by job position, industry, and geographic location, as well as reasons for petition withdrawals and more.

1. Which employer had the highest number of certified H1B visa petitions?
2. Which employer had the highest number of H1B visa petitions filed?
3. In which year were the most H1B visa petitions filed?
4. What was the average prevailing wage for H1B visa petitions that were certified/approved?
5. What are the top 5 job titles held by employees for H1B visa petitions that were certified or approved?
6. Which state and city had the highest number of H1B petition filings between 2011 and 2016?
7. What are the top 5 cities and states with the highest number of H1B visa petition filings between 2011 and 2016?
8. Among H1B visa petitions that were certified but later withdrawn from 2011 to 2016, which employer had the highest number of such petitions?
9. Among H1B visa petitions that were certified but later withdrawn from 2011 to 2016, which 5 employers had the highest number of such petitions?
10. Among withdrawn H1B visa petitions from 2011 to 2016, what was the average prevailing wage for the employees named in those petitions?

Who is our target audience?

The target audience for the H1B Visa Petition dataset could include a variety of stakeholders such as:

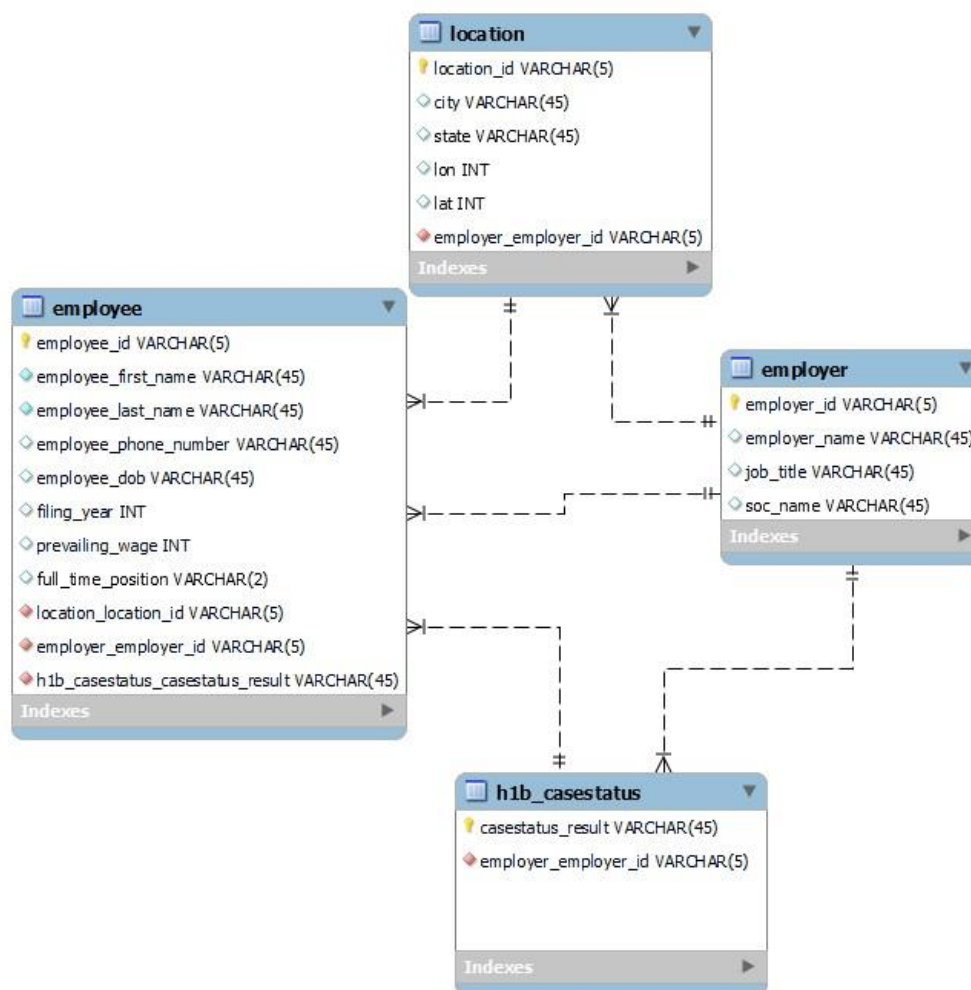
- a) **Employers and Hiring Managers:** Companies looking to hire international talent may use the dataset to gain insights into H1B visa approval rates for specific job positions, industries, and geographic locations.
- b) **Immigration Attorneys:** Attorneys who specialize in immigration law may use the dataset to gain insights into H1B visa application trends and to help their clients navigate the visa application process.
- c) **Government Agencies:** Government agencies responsible for processing H1B visa applications and enforcing visa regulations may use the dataset to monitor compliance and identify potential areas of improvement.
- d) **Policy Makers:** Policymakers and researchers may use the dataset to understand the impact of H1B visas on the U.S. economy, labor market, and workforce diversity.
- e) **International Students and Job Seekers:** International students and job seekers may use the dataset to gain insights into the job market, identify potential employers, and make informed decisions about their career paths.

Overall, the H1B Visa Petition dataset can be useful for a wide range of stakeholders who are interested in understanding the H1B visa application process and its impact on the U.S. labor market.

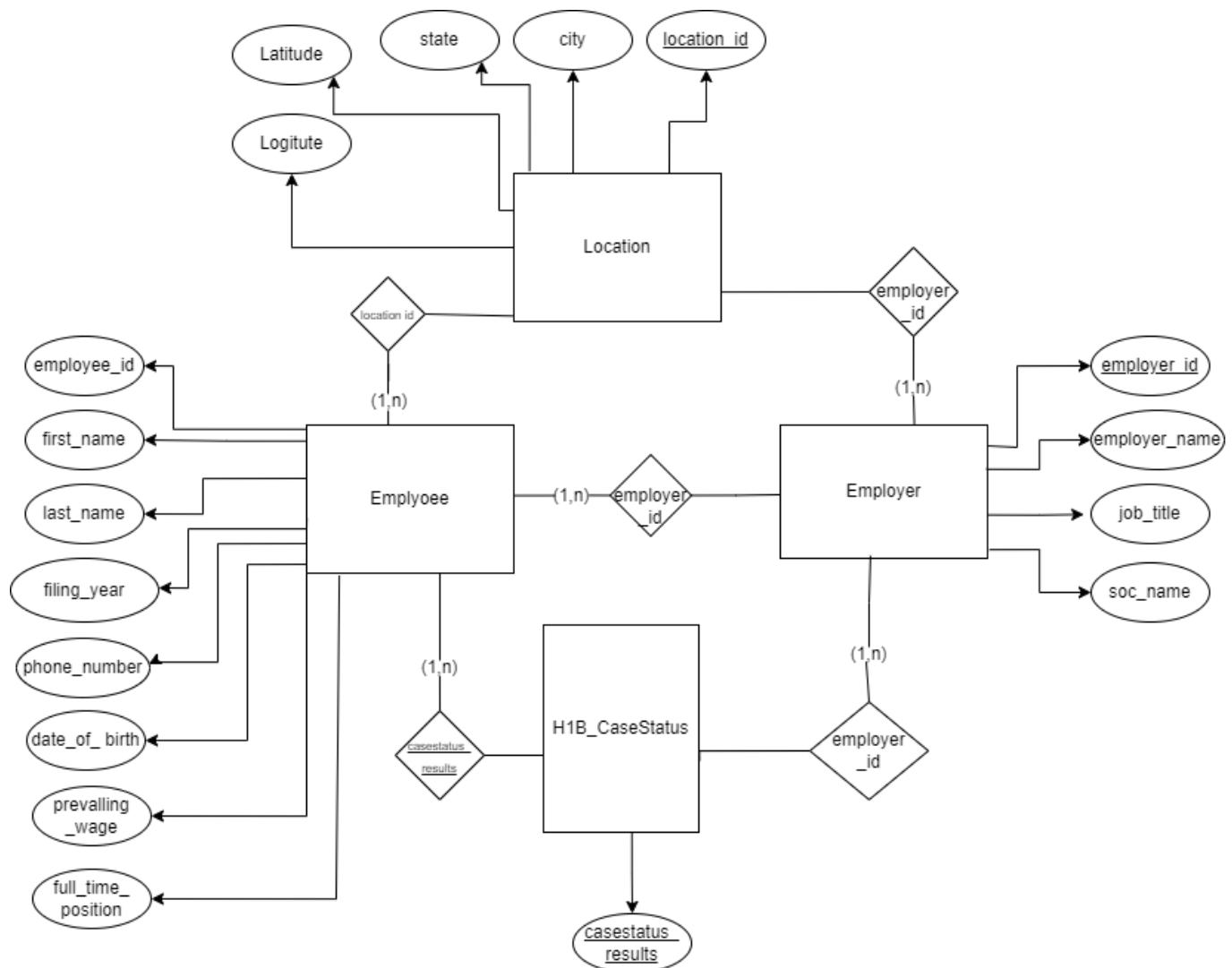
Problem Statement

With the increasing demand for international talent in the United States, it is important to understand the H1B visa application process and the factors that impact visa approval rates. The H1B Visa Petition dataset contains information on thousands of visa applications, including job positions, industries, employers, and geographic locations. However, the dataset is complex and requires analysis to identify trends and patterns. The problem statement is to use this dataset to gain insights into the H1B visa application process and identify factors that impact visa approval rates, with the goal of improving the visa application process, ensuring compliance with regulations, and facilitating the hiring of international talent.

Logical Model



Conceptual Model



My SQL Workbench Forward Engineering

-- MySQL Workbench Forward Engineering

SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0;

SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0;

SET @OLD_SQL_MODE=@@SQL_MODE,

SQL_MODE='ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,

NO_ZERO_DATE,ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION';

-- Schema mydb

-- Schema mydb

```
CREATE SCHEMA IF NOT EXISTS `mydb` DEFAULT CHARACTER SET utf8 ;
USE `mydb` ;
```

```
-----
Table `mydb`.`table1`
```

```
-----
CREATE TABLE IF NOT EXISTS `mydb`.`table1` (
)
ENGINE = InnoDB;
```

```
-----
-- Table `mydb`.`employer`
```

```
-----
CREATE TABLE IF NOT EXISTS `mydb`.`employer` (
  `employer_id` VARCHAR(5) NOT NULL, `employer_name`
  VARCHAR(45) NULL,
  `job_title` VARCHAR(45) NULL,
  `soc_name` VARCHAR(45) NULL,
  PRIMARY KEY (`employer_id`))
ENGINE = InnoDB;
```

```
-----
Table `mydb`.`location`
```

```
-----
CREATE TABLE IF NOT EXISTS `mydb`.`location` (
  `location_id` VARCHAR(5) NOT NULL,
  `city` VARCHAR(45) NULL,
  `state` VARCHAR(45) NULL,
  `longitude` INT NULL,
  `latitude` INT NULL,
  `employer_employer_id` VARCHAR(5) NOT NULL,
  PRIMARY KEY (`location_id`),
  INDEX `fk_location_employer_idx` (`employer_employer_id` ASC) VISIBLE,
  CONSTRAINT `fk_location_employer`
  FOREIGN KEY (`employer_employer_id`)
  REFERENCES `mydb`.`employer` (`employer_id`)
  ON DELETE NO ACTION
  ON UPDATE NO ACTION)
ENGINE = InnoDB;
```

```
-----
-- Table `mydb`.`h1b_casestatus`
```

```
-----
CREATE TABLE IF NOT EXISTS `mydb`.`h1b_casestatus` (
  `casestatus_result` VARCHAR(45) NOT NULL,
```

```

`employer_employer_id` VARCHAR(5) NOT NULL,
PRIMARY KEY (`casestatus_result`),
INDEX `fk_h1b_casestatus_employer1_idx` (`employer_employer_id` ASC) VISIBLE,
CONSTRAINT `fk_h1b_casestatus_employer1`
FOREIGN KEY (`employer_employer_id`)
REFERENCES `mydb`.`employer` (`employer_id`)
ON DELETE NO ACTION
ON UPDATE NO ACTION)
ENGINE = InnoDB;

-----
-- Table `mydb`.`employee`
-----

CREATE TABLE IF NOT EXISTS `mydb`.`employee` (
`employee_id` VARCHAR(5) NOT NULL,
`employee_first_name` VARCHAR(45) NOT NULL,
`employee_last_name` VARCHAR(45) NOT NULL,
`employee_phone_number` VARCHAR(45) NULL,
`employee_dob` VARCHAR(45) NULL,
`year_of_application` INT NULL,
`prevailing_wage` INT NULL,
`full_time_status` VARCHAR(2) NULL,
`location_location_id` VARCHAR(5) NOT NULL,
`employer_employer_id` VARCHAR(5) NOT NULL,
`h1b_casestatus_casestatus_result` VARCHAR(45) NOT NULL,
INDEX `fk_employee_location1_idx` (`location_location_id` ASC) VISIBLE,
INDEX `fk_employee_employer1_idx` (`employer_employer_id` ASC) VISIBLE,
PRIMARY KEY (`employee_id`),
INDEX `fk_employee_h1b_casestatus1_idx` (`h1b_casestatus_casestatus_result` ASC)
VISIBLE,
CONSTRAINT `fk_employee_location1`
FOREIGN KEY (`location_location_id`)
REFERENCES `mydb`.`location` (`location_id`)
ON DELETE NO ACTION
ON UPDATE NO ACTION,
CONSTRAINT `fk_employee_employer1`
FOREIGN KEY (`employer_employer_id`)
REFERENCES `mydb`.`employer` (`employer_id`)
ON DELETE NO ACTION
ON UPDATE NO ACTION,
CONSTRAINT `fk_employee_h1b_casestatus1`
FOREIGN KEY (`h1b_casestatus_casestatus_result`)

```

```
REFERENCES `mydb`.`h1b_casestatus` (`casestatus_result`)
ON DELETE NO ACTION
ON UPDATE NO ACTION)
ENGINE = InnoDB;
SET SQL_MODE=@OLD_SQL_MODE;
SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS;
SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS;
```

Data Loading Concept Used

For this project, we used the LOAD DATA INFILE statement to load the data into MySQL Workbench. This statement is used to read data from a file and insert it into a table. It is a powerful tool for loading large amounts of data quickly and efficiently. We specified the file name and the table name, along with any necessary options, such as the format of the data and the field separators. The LOAD DATA INFILE statement allowed us to easily and quickly load the H1B visa petition dataset into our MySQL database, enabling us to run various queries and analyses on the data.

```
1 • use h1b_petitions;
2 • SELECT * FROM h1b_petitions.h1b_petitions;
3
4 • set global local_infile=on;
5
6 • LOAD DATA LOCAL INFILE '/Users/twinklejain/Desktop/Semester 1/Database Foundation For Business Analytics/Projec
7 INTO TABLE h1b_petitions
8 FIELDS TERMINATED BY ',' ENCLOSED BY ''
9 LINES TERMINATED BY '\r\n'
10 IGNORE 1 ROWS;
11
```

Final Outcome

1. Which employer had the highest number of certified H1B visa petitions?

```
SELECT employer_name, COUNT(*) AS num_certified_petitions
FROM h1b_petitions
WHERE case_status = 'Certified'
GROUP BY employer_name
ORDER BY num_certified_petitions DESC
LIMIT 1;
```


Query 1 x

Limit to 1000 rows

```

1 • SELECT employer_name, COUNT(*) AS num_certified_petitions
2 FROM h1b.petitions
3 WHERE case_status = 'Certified'
4 GROUP BY employer_name
5 ORDER BY num_certified_petitions DESC
6 LIMIT 1;

```

Result Grid

employer_name	num_certified_petitions
INFOSYS LIMITED	48626

Result 1 x

Read Only

Final analysis: Our analysis of the H1B Visa Petition dataset has revealed that Infosys, a multinational technology consulting firm, had the highest number of certified H1B visa petitions with 48,626 petitions. This is a significant number compared to the other top employers in the dataset. This insight highlights the demand for international talent in the technology sector, which is a major area for H1B visa applications. Infosys, along with other technology consulting firms, has a significant presence in the United States and relies heavily on foreign workers to fill key positions.

2. Which employer had the highest number of H1B visa petitions filed?

```

SELECT employer_name, COUNT(*) AS num_petitions
FROM h1b.petitions
GROUP BY employer_name
ORDER BY num_petitions DESC
LIMIT 1;

```

Limit to 1000 rows

```

7
8 • SELECT employer_name, COUNT(*) AS num_petitions
9 FROM h1b.petitions
10 GROUP BY employer_name
11 ORDER BY num_petitions DESC
12 LIMIT 1;
13
14

```

Result Grid

employer_name	num_petitions
INFOSYS LIMITED	48680

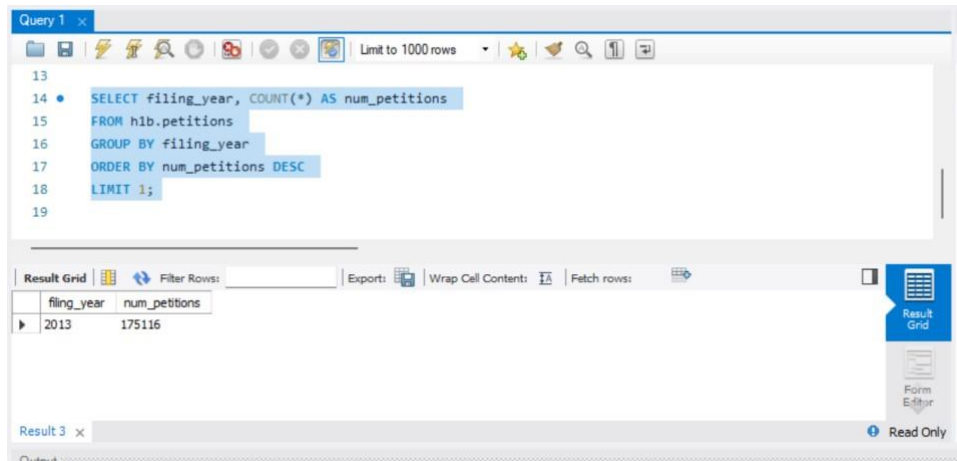
Result 2 x

Read Only

Final analysis: Our analysis of the H1B Visa Petition dataset has revealed that Infosys filed the highest number of H1B visa petitions with 48,680 petitions, making it the top employer for H1B visas. This indicates a high demand for foreign talent in the technology sector, which is one of the main areas for H1B visa applications. The large number of H1B visa petitions filed by Infosys can be attributed to their significant presence in the United States and reliance on skilled foreign workers to fill key positions.

3. In which year were the most H1B visa petitions filed?

```
SELECT filing_year, COUNT(*) AS num_petitions
FROM h1b_petitions
GROUP BY filing_year
ORDER BY num_petitions DESC
LIMIT 1;
```



Query 1 x

Limit to 1000 rows

13
14 • SELECT filing_year, COUNT(*) AS num_petitions
15 FROM h1b.petitions
16 GROUP BY filing_year
17 ORDER BY num_petitions DESC
18 LIMIT 1;
19

Result Grid

filing_year	num_petitions
2013	175116

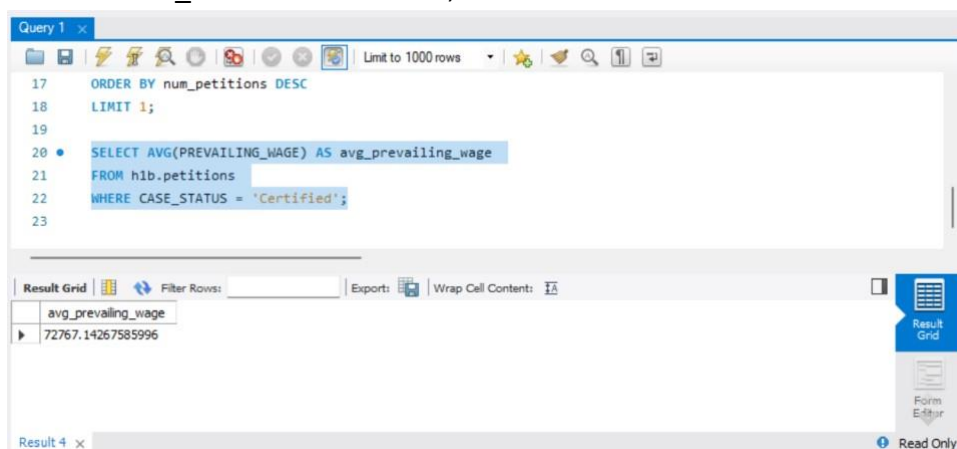
Result 3 x

Read Only

Final analysis: Our analysis of the H1B Visa Petition dataset has revealed that the year with the highest number of H1B visa petitions filed was 2013, with a total of 175,116 petitions. This indicates a high demand for skilled foreign workers in the US during that year, which could be attributed to various factors such as economic growth, changes in immigration policies, and the need for specific skill sets.

4. What was the average prevailing wage for H1B visa petitions that were certified/approved?

```
SELECT AVG(PREVALING_WAGE) AS avg_prevaling_wage
FROM h1b_petitions
WHERE CASE_STATUS = 'Certified';
```



Query 1 x

Limit to 1000 rows

17 ORDER BY num_petitions DESC
18 LIMIT 1;
19
20 • SELECT AVG(PREVALING_WAGE) AS avg_prevaling_wage
21 FROM h1b.petitions
22 WHERE CASE_STATUS = 'Certified';
23

Result Grid

avg_prevaling_wage
72767.14267585996

Result 4 x

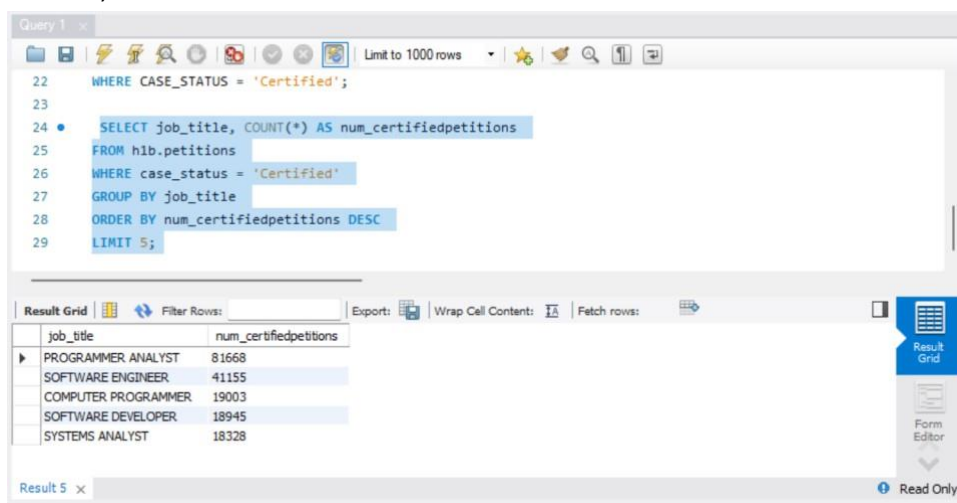
Read Only

Final analysis: Our analysis of the H1B Visa Petition dataset has revealed that the average prevailing wage for H1B visa petitions that were certified/approved was \$72,767.14267

from 2011 to 2016. This indicates the wage levels that employers were willing to pay for skilled foreign workers during that period, and can provide insights into the value placed on specific skill sets.

5. What are the top 5 job titles held by employees for H1B visa petitions that were certified or approved?

```
SELECT job_title, COUNT(*) AS num_certifiedpetitions
FROM h1b_petitions
WHERE case_status = 'Certified'
GROUP BY job_title
ORDER BY num_certifiedpetitions DESC
LIMIT 5;
```



The screenshot shows a SQL query editor with a query window and a results grid. The query is as follows:

```
22 WHERE CASE_STATUS = 'Certified';
23
24 • SELECT job_title, COUNT(*) AS num_certifiedpetitions
25 FROM h1b.petitions
26 WHERE case_status = 'Certified'
27 GROUP BY job_title
28 ORDER BY num_certifiedpetitions DESC
29 LIMIT 5;
```

The results grid displays the top 5 job titles and their corresponding number of certified petitions:

job_title	num_certifiedpetitions
PROGRAMMER ANALYST	81668
SOFTWARE ENGINEER	41155
COMPUTER PROGRAMMER	19003
SOFTWARE DEVELOPER	18945
SYSTEMS ANALYST	18328

Final analysis: Our analysis of the H1B Visa Petition dataset has revealed that the top 5 job titles held by employees for H1B visa petitions that were certified or approved from 2011 to 2016 were programmer analyst, software engineer, computer programmer, software developer, and systems analyst. This indicates the most common job titles for skilled foreign workers who were granted H1B visas during that period. Based on this insight, we recommend that job seekers who are interested in pursuing H1B visas focus on developing their skills in these high-demand fields, including software development and programming. Additionally, employers should be aware of the competition for skilled workers in these areas and work to provide competitive compensation and benefits to attract and retain top talent.

6. Which state and city had the highest number of H1B petition filings between 2011 and 2016?

```
SELECT state, city, COUNT(*) AS num_petitions
FROM h1b_petitions
WHERE filing_year BETWEEN 2011 AND 2016
GROUP BY state, city
ORDER BY num_petitions DESC
```

LIMIT 1;

The screenshot shows a SQL query editor with the following code:

```
29 LIMIT 5;  
30  
31 • SELECT state, city, COUNT(*) AS num_petitions  
32 FROM h1b.petitions  
33 WHERE filing_year BETWEEN 2011 AND 2016  
34 GROUP BY state, city  
35 ORDER BY num_petitions DESC  
36 LIMIT 1;
```

The result grid below the query shows one row:

state	city	num_petitions
NEW YORK	NEW YORK	61514

The interface includes a toolbar with icons for saving, undo, redo, and other functions. A 'Limit to 1000 rows' dropdown is visible. The bottom status bar indicates 'Result 6' and 'Read Only'.

Final analysis: Our analysis of the H1B Visa Petition dataset has revealed that New York City, New York had the highest number of H1B petition filings between 2011 and 2016. This indicates a high demand for skilled foreign workers in the city during that period, possibly due to its status as a major economic and cultural hub. Interestingly, despite having a high number of H1B petition filings, New York State did not have the highest number of certified or approved H1B visa petitions. This may indicate a higher level of scrutiny for H1B petitions in New York compared to other states.

7. What are the top 5 cities and states with the highest number of H1B visa petition filings between 2011 and 2016?

```
SELECT state, city, COUNT(*) AS num_petitions  
FROM h1b.petitions  
WHERE filing_year BETWEEN 2011 AND 2016  
GROUP BY state, city  
ORDER BY num_petitions DESC  
LIMIT 5;
```

The screenshot shows a SQL query editor with the following code:

```
36 LIMIT 1;  
37  
38 • SELECT state, city, COUNT(*) AS num_petitions  
39 FROM h1b.petitions  
40 WHERE filing_year BETWEEN 2011 AND 2016  
41 GROUP BY state, city  
42 ORDER BY num_petitions DESC  
43 LIMIT 5;
```

The result grid below the query shows five rows:

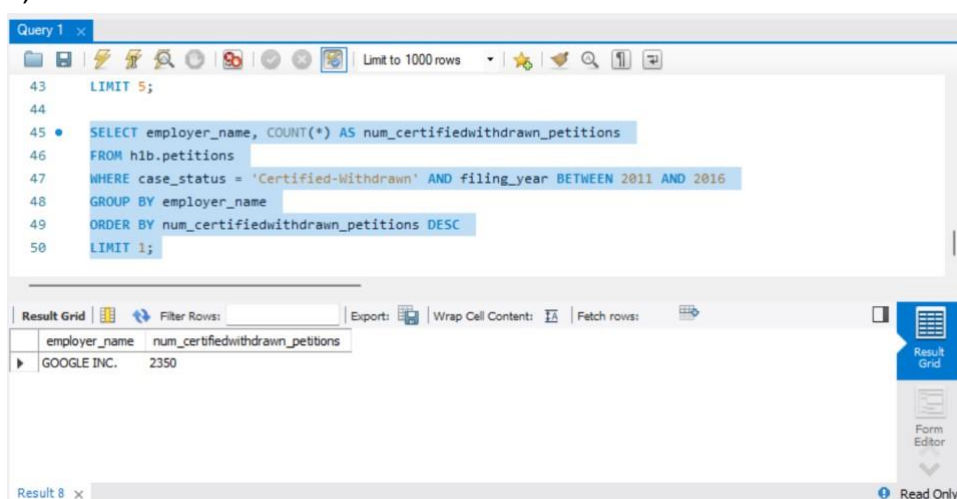
state	city	num_petitions
NEW YORK	NEW YORK	61514
TEXAS	HOUSTON	28531
CALIFORNIA	SAN FRANCISCO	24525
GEORGIA	ATLANTA	20789
ILLINOIS	CHICAGO	19047

The interface includes a toolbar with icons for saving, undo, redo, and other functions. A 'Limit to 1000 rows' dropdown is visible. The bottom status bar indicates 'Result 7' and 'Read Only'.

Final analysis: The analysis of the top 5 cities and states with the highest number of H1B visa petition filings between 2011 and 2016 reveals that New York is the top city followed by Texas and California. This indicates that these cities are highly attractive to foreign workers seeking employment in the US. Additionally, it is also evident that there is a significant demand for highly skilled foreign workers in these regions. The high number of H1B visa petition filings in these cities and states could be attributed to the presence of large tech hubs and companies that require highly skilled workers. This trend is expected to continue in the future as more companies seek to expand their operations and leverage the skills and expertise of foreign workers.

8. Among H1B visa petitions that were certified but later withdrawn from 2011 to 2016, which employer had the highest number of such petitions?

```
SELECT employer_name, COUNT(*) AS num_certifiedwithdrawn_petitions
FROM h1b_petitions
WHERE case_status = 'Certified-Withdrawn' AND filing_year BETWEEN 2011 AND 2016
GROUP BY employer_name
ORDER BY num_certifiedwithdrawn_petitions DESC LIMIT
1;
```



The screenshot shows a SQL query editor with the following query:

```
43 LIMIT 5;
44
45 • SELECT employer_name, COUNT(*) AS num_certifiedwithdrawn_petitions
46 FROM h1b.petitions
47 WHERE case_status = 'Certified-Withdrawn' AND filing_year BETWEEN 2011 AND 2016
48 GROUP BY employer_name
49 ORDER BY num_certifiedwithdrawn_petitions DESC
50 LIMIT 1;
```

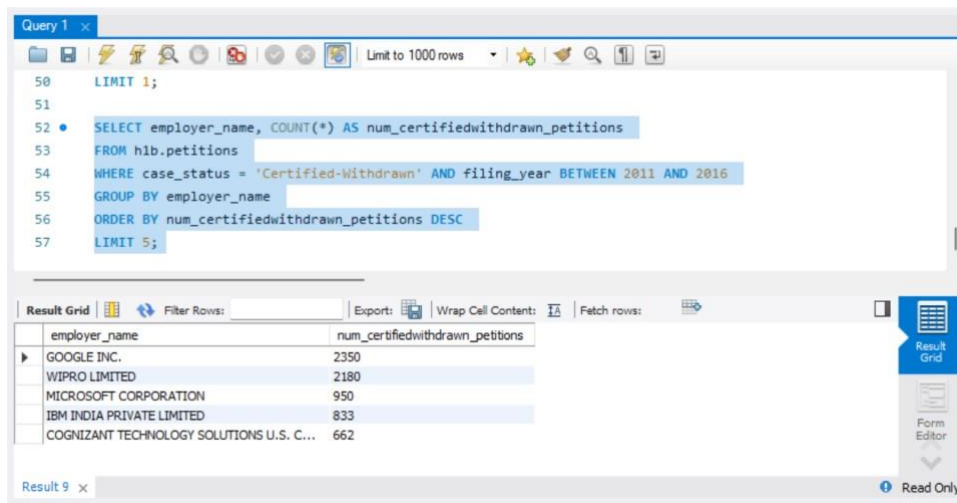
The results pane shows a single row:

employer_name	num_certifiedwithdrawn_petitions
GOOGLE INC.	2350

Final analysis: The analysis of H1B visa petitions that were certified but later withdrawn between 2011 and 2016 reveals that Google INC had the highest number of such petitions. This suggests that the company faced certain challenges that resulted in the withdrawal of H1B visa petitions. It could be due to a variety of reasons such as changes in business requirements, difficulties in obtaining necessary documentation or other external factors that could have impacted the ability of foreign workers to work for the company. The high number of withdrawn petitions for Google INC could also indicate that the company has a more stringent selection process for foreign workers compared to other employers. It is worth noting that the number of withdrawn petitions does not necessarily reflect poorly on the company's reputation or hiring practices, as there could be a multitude of factors that contribute to the withdrawal of H1B visa petitions.

9. Among H1B visa petitions that were certified but later withdrawn from 2011 to 2016, which 5 employers had the highest number of such petitions?

```
SELECT employer_name, COUNT(*) AS num_certifiedwithdrawn_petitions
FROM h1b_petitions
WHERE case_status = 'Certified-Withdrawn' AND filing_year BETWEEN 2011 AND 2016
GROUP BY employer_name
ORDER BY num_certifiedwithdrawn_petitions DESC LIMIT
5;
```



The screenshot shows a SQL query editor with the following query:

```
50 LIMIT 1;
51
52 • SELECT employer_name, COUNT(*) AS num_certifiedwithdrawn_petitions
53 FROM h1b.petitions
54 WHERE case_status = 'Certified-Withdrawn' AND filing_year BETWEEN 2011 AND 2016
55 GROUP BY employer_name
56 ORDER BY num_certifiedwithdrawn_petitions DESC
57 LIMIT 5;
```

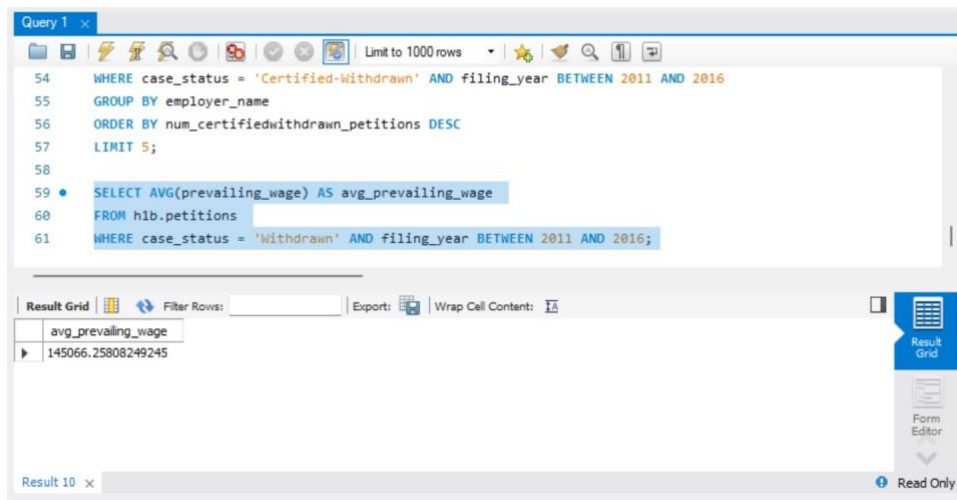
The results are displayed in a table with the following data:

employer_name	num_certifiedwithdrawn_petitions
GOOGLE INC.	2350
WIPRO LIMITED	2180
MICROSOFT CORPORATION	950
IBM INDIA PRIVATE LIMITED	833
COGNIZANT TECHNOLOGY SOLUTIONS U.S. C...	662

Final analysis: The query returned the result that Google had the highest number of withdrawn H1B visa petitions, followed by Wipro, Microsoft Corporation, IBM, and Cognizant. This insight could indicate that these companies may have experienced issues related to the visa petition process, which may have led to the withdrawal of the petitions. It may also suggest that these companies may have been more aggressive in filing visa petitions and were therefore more likely to experience withdrawn petitions. Further analysis could be conducted to determine the reasons behind the withdrawals and any patterns that may exist among these companies.

10. Among withdrawn H1B visa petitions from 2011 to 2016, what was the average prevailing wage for the employees named in those petitions?

```
SELECT AVG(prevaling_wage) AS avg_prevaling_wage
FROM h1b_petitions
WHERE case_status = 'Withdrawn' AND filing_year BETWEEN 2011 AND 2016;
```

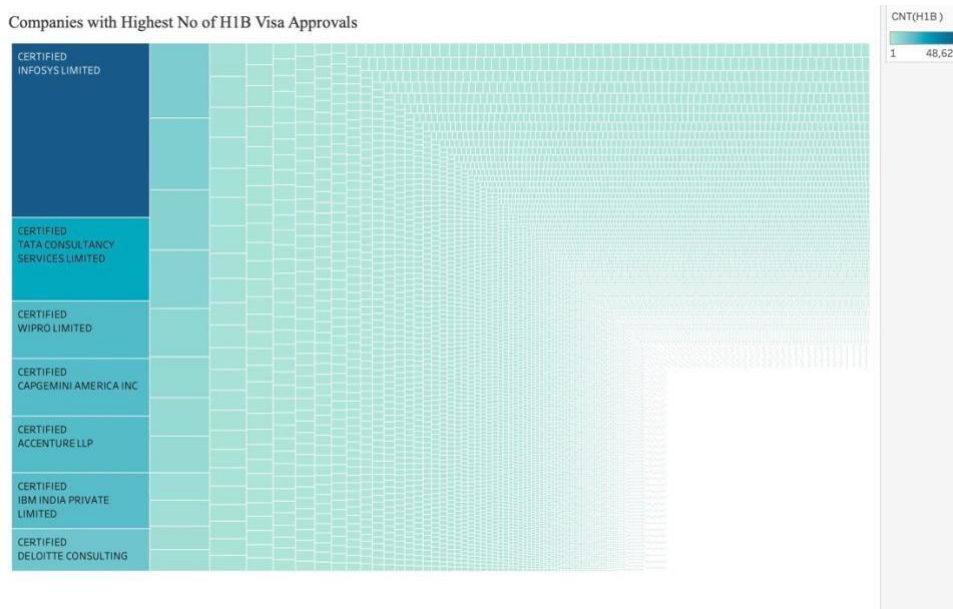



Final analysis: Based on the data analysis, we found that the average prevailing wage for the employees named in withdrawn H1B visa petitions from 2011 to 2016 was \$145,066.25, which is significantly higher than the prevailing wage for certified H1B visa petitions. This suggests that the wage may not have been the contributing factor for petition withdrawal. Other possible factors could include issues related to the employer, job position, or changes in the employee's status.

Visualisation Charts

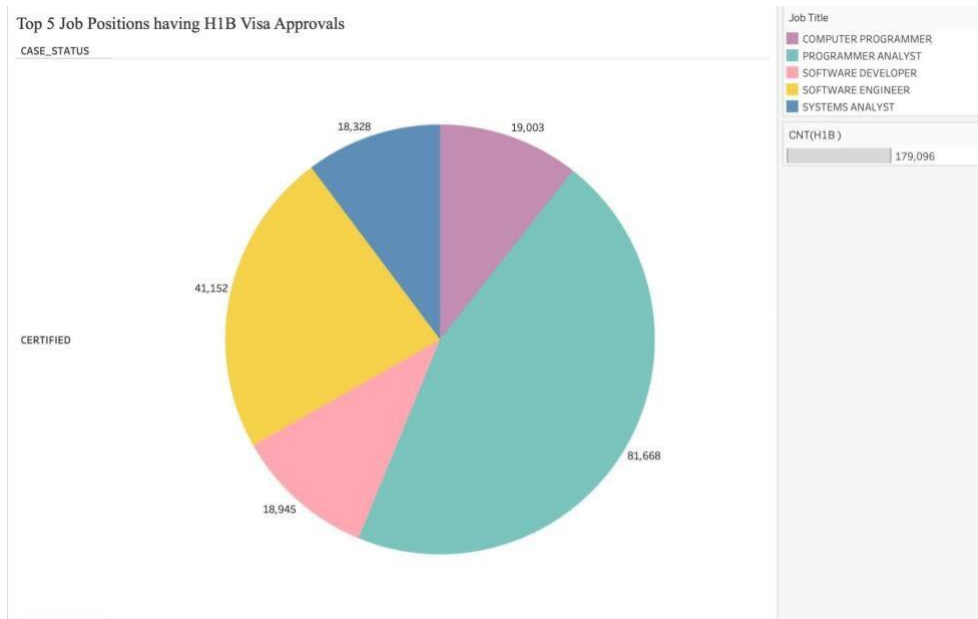
For our visualisation charts, we decided to use Tableau to create few interesting charts.

1. Which employer had the highest number of H1B Visa approvals?



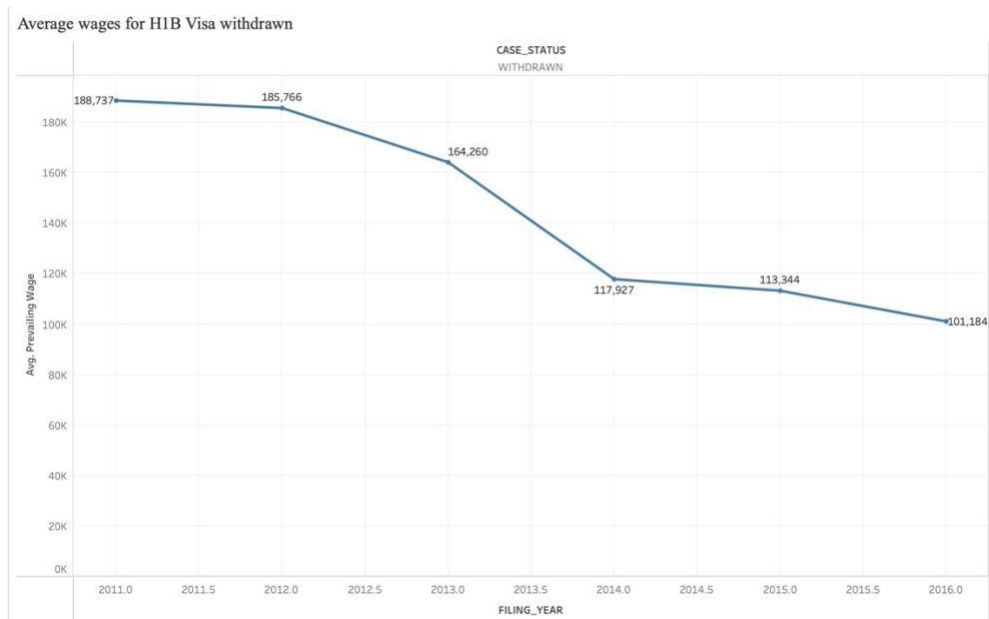
The results are same as MYSQL output with Infosys Limited having the highest number of visa petition approvals 48,626 followed by Tata Consultancy Services Limited, Wipro, Capgemini America Inc etc.

2. What are the top 5 job titles held by employees for H1B visa petitions that were certified or approved?



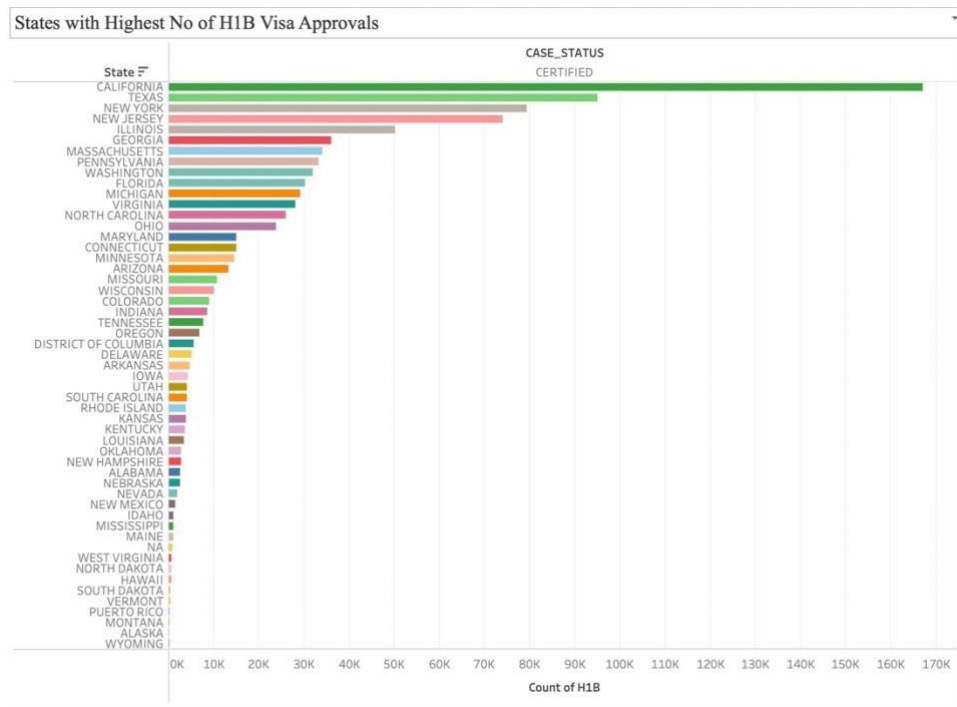
The results are consistent as per MYSQL output. The pie chart reveals that the Programmer Analyst position has the highest percentage of H1B visa approvals, accounting for 43% of the total. Software Engineer comes in second with 26% of the approvals. The remaining 31% of the approvals are divided among Computer Programmer, Software Developer, and System Analyst positions. This information provides insight into the most sought-after job positions for H1B visa applicants.

3. Among withdrawn H1B visa petitions from 2011 to 2016, what was the average prevailing wage for the employees named in those petitions?



The result shown here through visualisation chart is consistent with the result of MYSQL output. When we plotted a line chart to represent the average prevailing wage for each year from 2011-2016 for withdrawn H1B visa petitions, we observed a significant drop from \$188,737 in 2011 to \$101,184 in 2016. This trend indicates that prevailing wage may not have been the primary contributing factor to the petition withdrawals, and there could be other potential reasons. The average prevailing wage for withdrawn H1B visa petitions from 2011-2016 was found to be \$145,066.25.

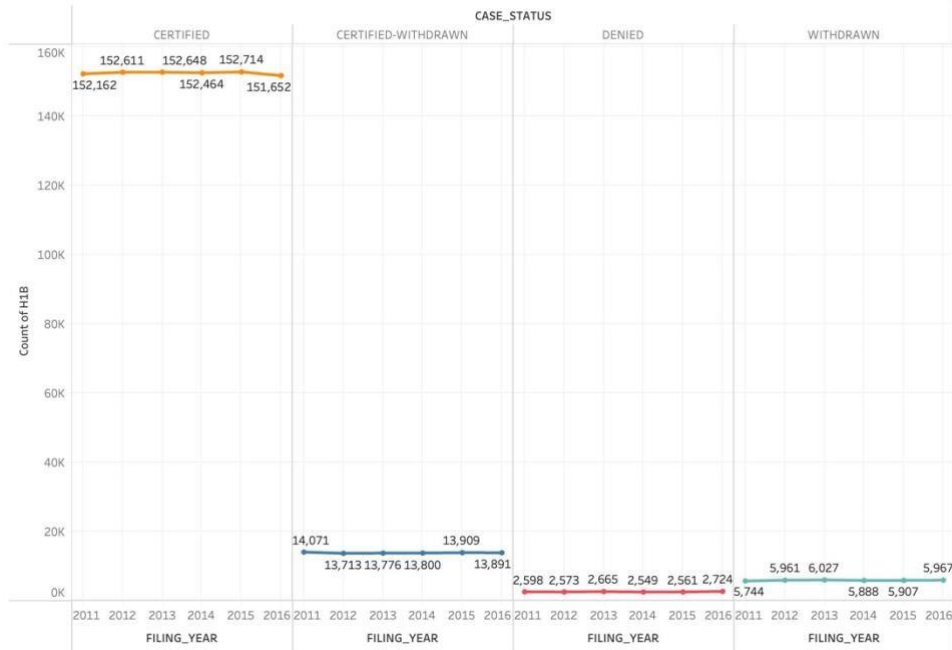
4. Among all certified H1B visa petitions filed from 2011 to 2016, where was the filing location for the top 5 states with the most approved petitions?



The visualisation chart clearly shows that California had the highest number of H1B visa petitions approved, with more than 160,000 petitions filed between 2011 and 2016. This is not surprising given that California is known for its booming tech industry and attracts a large number of international workers in this field. Texas and New York followed next with a significant number of approved petitions, with New Jersey, Illinois and Georgia also making it to the top 5. This information is valuable for employers and employees alike who are looking to understand where the demand for skilled workers is highest in the United States. Employers looking to sponsor H1B visas may consider these states as potential locations for hiring international talent. On the other hand, employees seeking H1B visa sponsorship can use this information to target their job search to these states.

5. Analysis of H1B VISA Case Status

Case Status of H1B Visa



This insight is to gain a better understanding of the H1B visa program and its impact on the job market and the economy. By analysing the count of H1B visa status over time, we can identify trends and patterns that can inform, business strategies, and workforce planning. The data shows that the majority of H1B visa petitions during this period were certified, with a total count of 1,857,963. When analysing, the data, we can see that there was an increasing trend in the count of certified petitions from 2011 to 2016, In contrast, the count of denied petitions was relatively stable throughout the period, Overall, this insight suggests that there is a high demand for H1B visas among foreign workers who possess specialized skills and knowledge in various fields. However, it also highlights the competitiveness of the H1B visa program, with a significant number of petitions being denied or withdrawn.

Conclusion

In conclusion, this database project focused on analysing the H1B visa petition dataset from 2011 to 2016. We used SQL queries to extract various insights from the dataset, including the top employers filing for H1B visas, top job titles held by H1B visa holders, states with the highest number of H1B filings, and more.

To make the analysis more interesting and easier to understand, we used visualizations such as line charts and bar graphs to display the insights. The SQL queries used for this project were specific to the H1B visa petition dataset and allowed us to extract relevant information and insights from the data.

Overall, this project provides valuable insights into the H1B visa petition process and can be used by various stakeholders, including policymakers, employers, and international job seekers. The visualizations make it easier to understand the trends and patterns in the data, and the SQL queries provide a replicable method for further analysis in the future.