1.How many entries do you have in your database who have applied for Fall 2024?

2,169

Query

```
SELECT COUNT(*) as count
FROM applicants
WHERE term LIKE '%Fall 2024%'
```

Explanation:

This query counts all entries in the applicants table where the term field contains "Fall 2024". The COUNT(*) function returns the total number of rows that match the condition. The LIKE operator with wildcard characters ('%') was used instead of an exact match to account for potential variations in how the term might be stored (e.g., "Fall 2024", "2024 Fall", etc.).

2. What percentage of entries are from international students (not American or Other) (to two decimal places)?

68.87%

Query

```
SELECT
  ROUND(
    (COUNT(*) FILTER (WHERE us_or_international = 'International') * 100.0) /
    NULLIF(COUNT(*), 0)::numeric,
    2
  ) as international_percentage
FROM applicants
WHERE us_or_international IS NOT NULL
```

Explanation:

This query calculates the percentage of international students among all entries with non-null nationality information. The COUNT(*) FILTER (WHERE...) syntax counts only rows where the condition is met. The result is multiplied by 100.0 to convert to a percentage, divided by the

total count, and rounded to two decimal places using the ROUND function. The NULLIF function prevents division by zero if there are no entries.

3. What is the average GPA, GRE, GRE V, GRE AW of applicants who provide these metrics?

GPA: 3.72

GRE Quant: 182.03

GRE Verbal: 158.46

GRE AW: 6.04

Query

```
SELECT
   ROUND(AVG(CASE WHEN gpa BETWEEN 0 AND 4 THEN gpa ELSE NULL END)::numeric, 2) as avg_gpa,
   ROUND(AVG(gre)::numeric, 2) as avg_gre,
   ROUND(AVG(gre_v)::numeric, 2) as avg_gre_v,
   ROUND(AVG(gre_aw)::numeric, 2) as avg_gre_aw
FROM applicants
WHERE gpa IS NOT NULL OR gre IS NOT NULL OR gre_v IS NOT NULL OR gre_aw IS NOT NULL
```

Explanation:

This query calculates the average values for GPA, GRE Quantitative, GRE Verbal, and GRE Analytical Writing scores. The AVG function computes the mean of non-null values for each column. For GPA, a CASE statement filters out values outside the realistic range of 0-4 to prevent outliers from skewing the results. The ::numeric cast ensures proper decimal handling, and ROUND formats each result to two decimal places.

4. What is their average GPA of American students in Fall 2024?

3.78

Query

```
SELECT ROUND(AVG(CASE WHEN gpa BETWEEN 0 AND 4 THEN gpa ELSE NULL END)::numeric, 2) as avg_gpa
```

```
FROM applicants
WHERE us_or_international = 'American' AND term LIKE '%Fall 2024%' AND gpa IS NOT
NULL
```

Explanation:

This query filters the data to include only American students applying for Fall 2024 who provided GPA information. It then calculates the average GPA, filtering out values outside the realistic range of 0-4. The combination of WHERE conditions ensures we're analyzing the specific subset of applicants we're interested in, and the CASE statement helps maintain data integrity by excluding unrealistic values.

5. What percent of entries for Fall 2024 are Acceptances (to two decimal places)?

40.43%

Query

```
SELECT
  ROUND(
    (COUNT(*) FILTER (WHERE status = 'Accepted' OR status LIKE '%Accept%') * 100.0) /
    NULLIF(COUNT(*), 0)::numeric,
    2
  ) as acceptance_percentage
FROM applicants
WHERE term LIKE '%Fall 2024%'
```

Explanation:

This query calculates the percentage of Fall 2024 applications that were accepted. The FILTER clause counts only entries where the status indicates acceptance, using both exact match and pattern matching to account for variations in how acceptance might be recorded. The result is converted to a percentage and rounded to two decimal places. The query considers all Fall 2024 applications as the denominator.

6. What is the average GPA of applicants who applied for Fall 2024 who are Acceptances?

3.75

Query

```
SELECT ROUND(AVG(CASE WHEN gpa BETWEEN 0 AND 4 THEN gpa ELSE NULL
END)::numeric, 2) as avg_gpa

FROM applicants

WHERE (status = 'Accepted' OR status LIKE '%Accept%')

AND term LIKE '%Fall 2024%'

AND gpa IS NOT NULL
```

Explanation:

This query combines multiple conditions to find the average GPA of accepted applicants for Fall 2024. It filters for accepted status (using both exact and pattern matching), Fall 2024 term, and non-null GPA values. The CASE statement ensures only realistic GPA values (between 0 and 4) are included in the calculation. This helps us understand the academic profile of successful applicants for the most recent application cycle.

7. How many entries are from applicants who applied to JHU for a masters degrees in Computer Science?

39

Query

```
SELECT COUNT(*) as count

FROM applicants

WHERE (program LIKE '%JHU%' OR

    program LIKE '%Johns Hopkins%' OR

    program LIKE '%John Hopkins%' OR

    program LIKE '%Hopkins University%')

AND program LIKE '%Computer Science%'

AND degree LIKE '%Master%'
```

Explanation:

This query counts applications specifically for Computer Science masters programs at Johns Hopkins University. Multiple LIKE conditions are used to capture different ways JHU might be referenced in the data (abbreviation, full name, common misspellings). Additional conditions ensure we're only counting Computer Science programs and masters degrees. This targeted approach allows us to analyze application patterns for a specific program at a specific institution.