# Analyze Survey Data
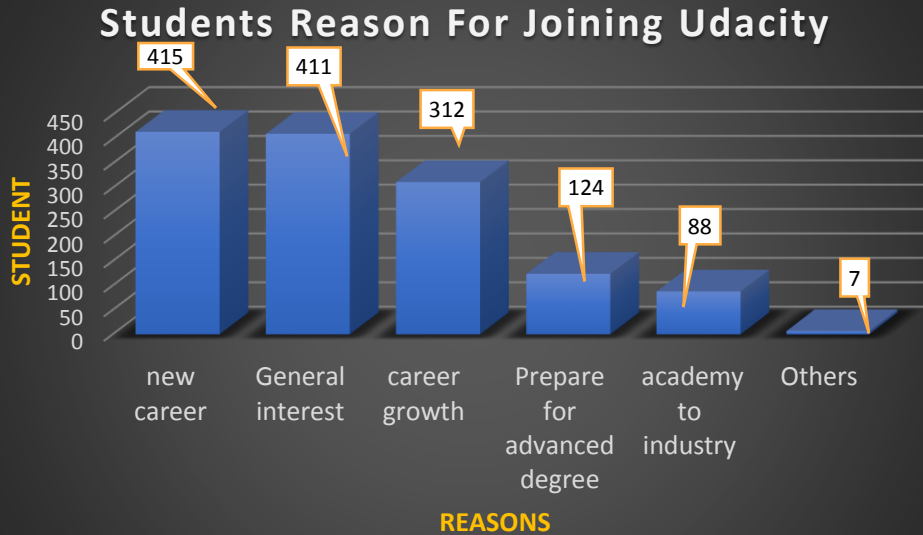
project (2)

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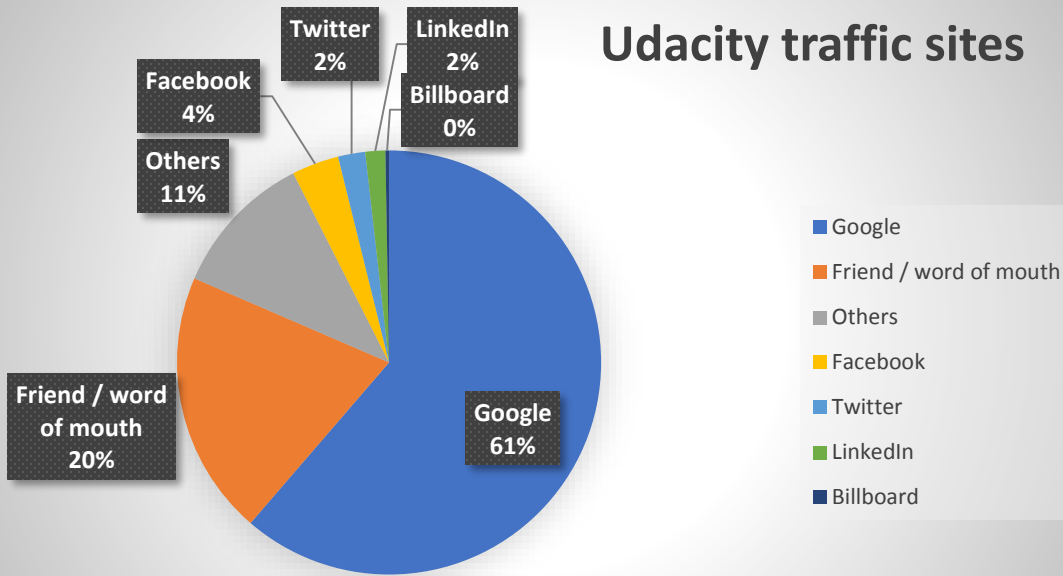DFND

# What's the most common reason for people to join Udacity?

## Students Reason For Joining Udacity



| Reason | Students |
|--------|----------|
| New career | 31% |
| General interest | 30% |
| Career growth | 23% |
| Prepare for advanced degree | 9% |
| Academy to industry | 6% |
| Others | 1% |

According to Udacity survey results, **the most common reason** for student to join Udacity is ***starting a new career*** as about **31%** of Udacity students sample (415 students) have joined Udacity for that reason. About **30%** of Udacity students sample have joined Udacity (411 students)for General interest. "so we can say that the second most popular reason as they're pretty close to starting new career reason.", about 23% of Udacity students(312 students) have joined Udacity for **career growth**. About 9% of Udacity students (124 student) have joined Udacity for **helping them in preparing to advanced degree** about 6% of Udacity students have joined Udacity for **helping them to move from the academy to industry** as well as about 1% of Udacity students have joined Udacity for other reasons.
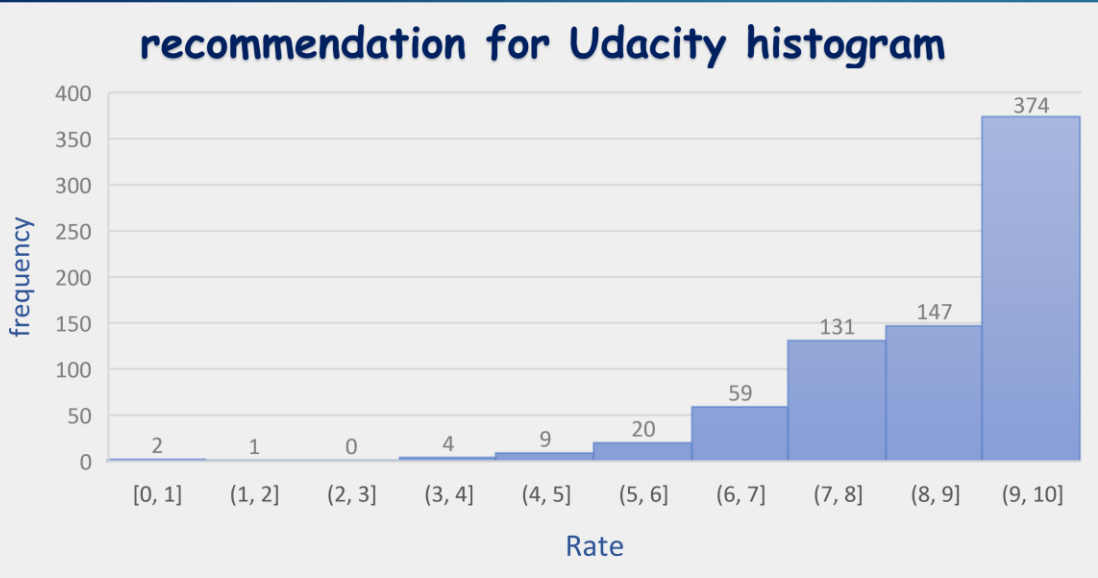
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# What's the most common way people find out about Udacity?

## Udacity traffic sites

Twitter 2%
LinkedIn 2%
Billboard 0%
Facebook 4%
Others 11%
Friend / word of mouth 20%
Google 61%

- Google
- Friend / word of mouth
- Others
- Facebook
- Twitter
- LinkedIn
- Billboard

| Reasons(practical) | Students |
|---|---|
| Google | 444 |
| Friend / word of mouth | 146 |
| Others | 80 |
| Facebook | 26 |
| Twitter | 15 |
| LinkedIn | 11 |
| Billboard | 2 |

According to Udacity survey results, Udacity website get the most traffics (the way which people know Udacity) from Google since about 61% of our sample(444students) knew Udacity from Google, 20% of Udacity student(about 146) from there friends, about 4% knew Udacity from Facebook, about 2% of Udacity students knew Udacity either from Twitter or LinkedIn as well as about 11% from the Udacity students sample knew Udacity from other ways.

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# What's the most Rate student gave for recommending Udacity? what that refers to?

## recommendation for Udacity histogram



| measure of center | |
|---|---|
| Mean($\bar{x}$) | 8.98 |
| Mode | 10 |
| Stdev($\sigma$) | 1.36 |

| 5 numbers summary | |
|---|---|
| Minimum | 0 |
| $Q_1$ | 8 |
| $Q_2$(median) | 10 |
| $Q_3$ | 10 |
| Maximum | 10 |
| IQR | 2 |

According to Udacity survey results, since the mode equals 10,so the most common rate of Udacity students is 10 and that shows the most of students get benefits from learning on Udacity and it helps them to achieve there google.
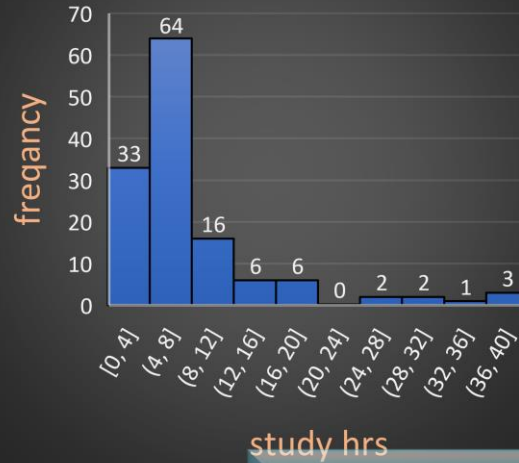
As we see from the histogram the data is left skewed. But the median = the mode, as well as the interatrial range (IQR)equal 2.

# Does the Number of vary hours based on Employment?



Histogram for employed study hrs
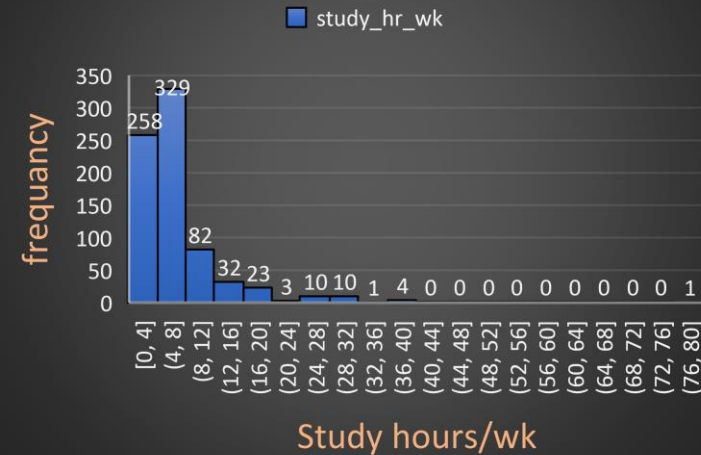


Histogram for unemployed study hrs

|  | Employed | Unemployed |
|---|---|---|
| Minimum | 0 | 0 |
| $Q_1$ | 4 | 3 |
| $Q_2$ (median) | 6 | 6 |
| $Q_3$ | 6 | 6 |
| Maximum | 80 | 40 |
| IQR | 2 | 3 |
| Mean($\bar{x}$) | 6.71 | 8.33 |
| Mode | 6 | 6 |
| Stdev($\sigma$) | 6.29 | 7.68 |

Comparing the employed to unemployed, there doesn't appear to be much of a difference between the number of study hours per week.  If we didn't pay attention to the extremely study students (those who study a lot of hours weekly) in each group, they are very similar in distribution and summary statistics.

According to Udacity survey results, Both of each group have **the same median** (6 hours per week), however, according to interquartile range (**IQR**) we can say the **unemployed** study hours(IQR=3) **more spread** than the **employed**(IQR=2) .
However the range of **employed**(80) greater than the age of **unemployed**(40).

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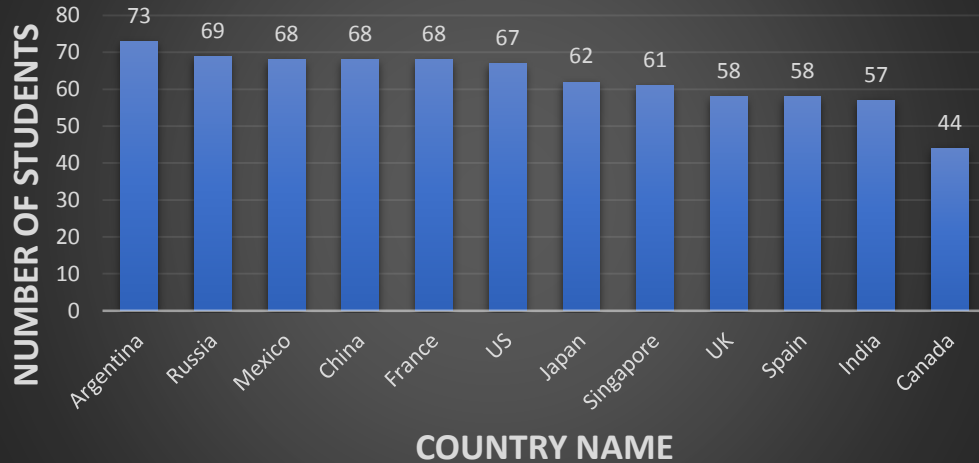# What's the common age of student who join Udacity for starting new career?

## Strating a new career age Histogram
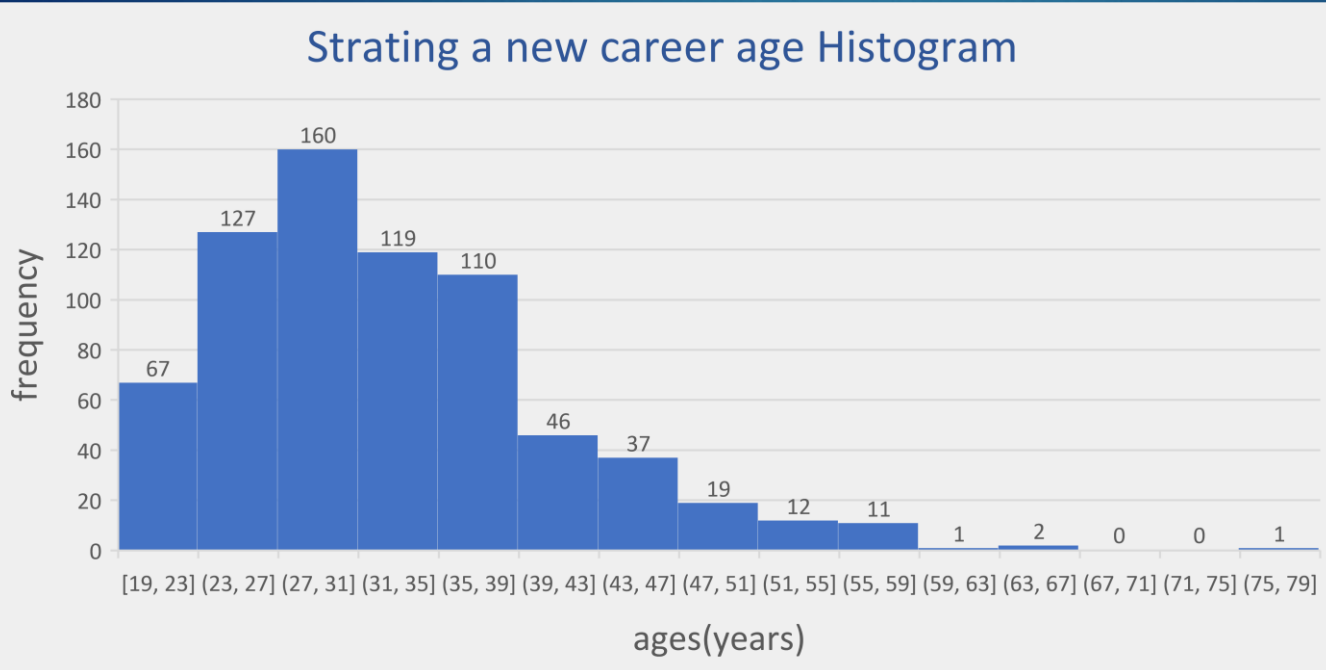


**5 numbers summary**

| | |
|---|---|
| Minimum | 20 |
| $Q_1$ | 27 |
| $Q_2$(median) | 31 |
| $Q_3$ | 38 |
| Maximum | 80 |
| IQR | 11 |
| Range | 60 |

**measure of center**

| | |
|---|---|
| Mean($\bar{x}$ ) | 33.13 |
| Mode | 29 |
| Stdev($\sigma$ ) | 8.45 |

According to Udacity survey results, since the median of that data set is 31(years) so the most common age of the people joined Udacity for starting a new career is about 31 years old.

As we can measure the spread of our data by interquartile range (IQR=11).

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# What are the most common countries/cities where students live?

## Udacity student location



| Country | Students (%) |
|---------|--------------|
| Argentina | 10 |
| Russia | 9 |
| Mexico | 9 |
| China | 9 |
| France | 9 |
| US | 9 |

| Country | Students (%) |
|---------|--------------|
| Japan | 8 |
| Singapore | 8 |
| UK | 8 |
| Spain | 8 |
| India | 7 |
| Canada | 6 |

According to Udacity survey results, The most place where Udacity students live in **Argentina** since about (**10% or 73 Udacity students**) form our sample lives there. **Russia ,Mexico**, **China**, **France** and **US** have about **9%** of Udacity student, **Japan**, **Singapore**, **UK** and **Spain** have about **8%** form Udacity students , about **7%** of Udacity student (57 students) lives in **India** as well as **6%** of Udacity students lives in **Canada**.

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# Does the age vary based on want to buy Udacity swag or not?



histgram for age of student that wants to buy swag(x)
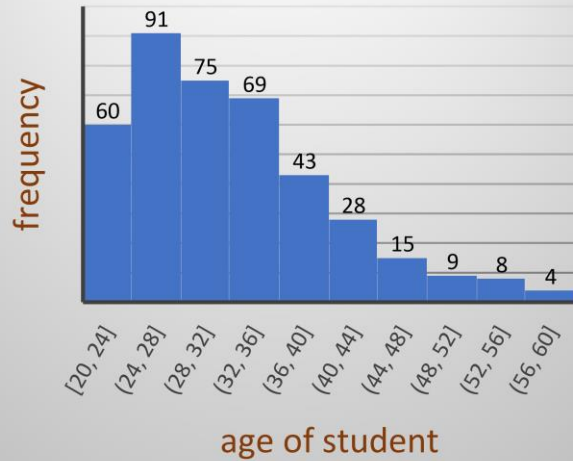


histogram of age of students doesn't want to buy udacity swag(Y)
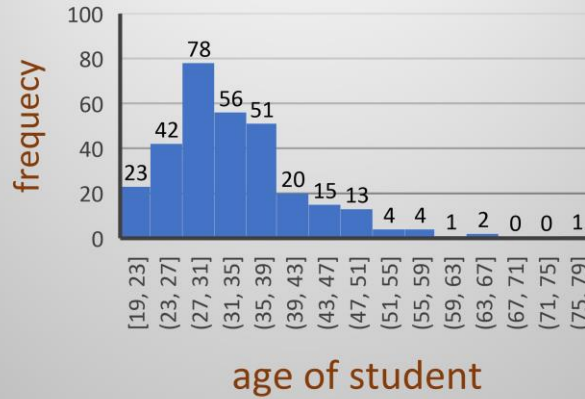
|  | $X$ | $Y$ |
|---|---|---|
| Minimum | 20 | 19 |
| $Q_1$ | 26 | 28 |
| $Q_2$ (median) | 31 | 32 |
| $Q_3$ | 37 | 38 |
| Maximum | 58 | 78 |
| IQR | 11 | 10 |
| range | 38 | 59 |
| Mean($\bar{x}, \bar{y}$) | 32.48 | 34.02 |
| Mode | 26 | 29 |
| Stdev($\sigma$) | 8.11 | 8.62 |

Comparing the students that wants to buy Udacity swag($X$) to don't want to buy it($Y$), there doesn't appear to be much of a difference between the age of students(median of(X)equals 31 and of (Y) 32).  If we didn't pay attention to the old ages in each group, they are very similar in distribution and summary statistics.

However the range of X (38 years) and Y (59 years), so Y data takes more wide range of ages than X group. however the group of don't want student is more spread according IQR.

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Thank you

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