Project: Analyze Survey Data
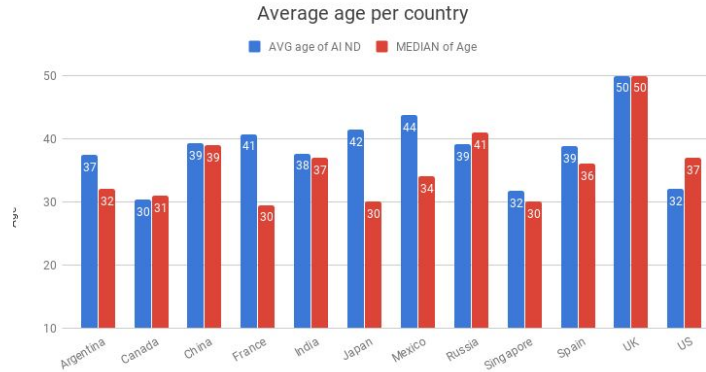
Submitted by Iryna Soltyska

This data is from Survey Respondents and is not from the entire Udacity Student population.

What is the average age of Artificial Intelligence students per country?

Average age per country

A	B	C	D	E	F	G
Country	AVG age of AI ND	MEDIAN of Age	STDEV of Age	MAX of Age	MIN of Age	Range
Argentina	37.4	32.0	19.7	118.0	22	96
Canada	30.4	31.0	7.1	41.0	23	18
China	39.3	39.0	9.6	59.0	28	31
France	40.8	29.5	31.4	118.0	25	93
India	37.7	37.0	7.4	53.0	26	27
Japan	41.5	30.0	28.6	118.0	22	96
Mexico	43.7	34.0	25.7	118.0	29	89
Russia	39.1	41.0	10.2	56.0	22	34
Singapore	31.7	30.0	6.7	40.0	24	16
Spain	38.8	36.0	27.6	118.0	0	118
UK	50.0	50.0	#DIV/0!	50.0	50	0
US	32.0	37.0	14.7	54.0	1	53

Students ages are not distributed equally between countries. There are countries like Mexico where the average age is 44 and countries like Singapore where the average age is 32 which is less then average age (35) of the whole data set. In UK the average age is the highest - 50. It looks suspicious but Standard Deviation is undefined for the UK which means there is only one record so there is not enough data to make any conclusions.
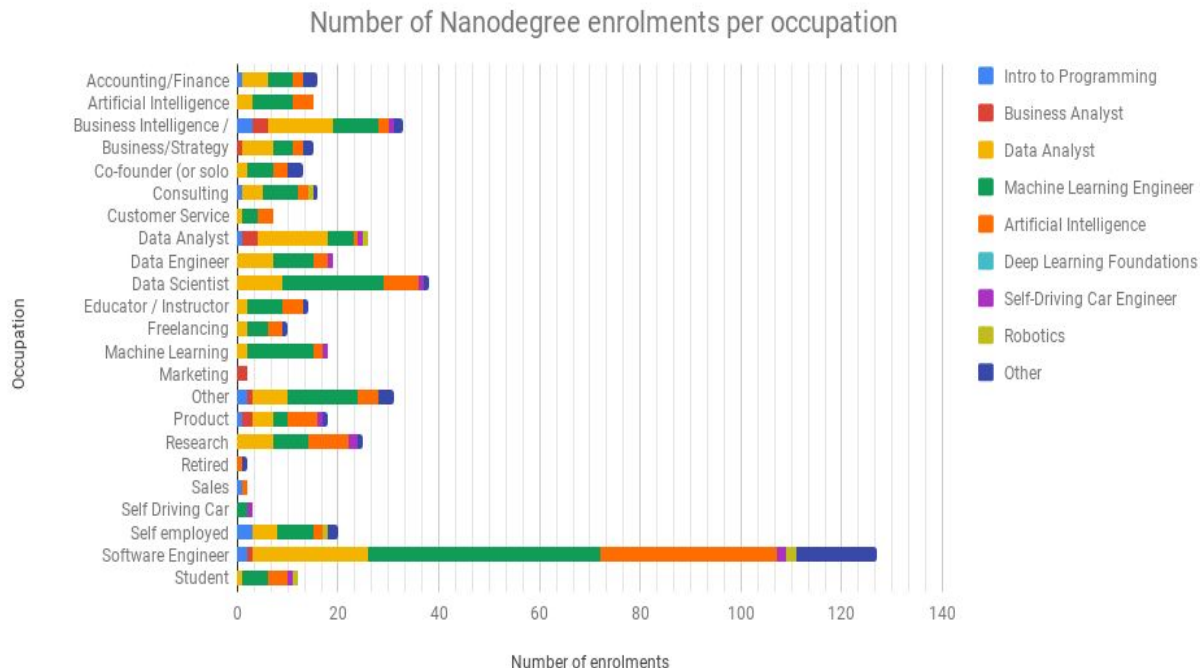
In China, India, Russia, Canada and Singapore average and median are very close to each other this means that data is normally distributed and probably our estimations are precise. The range shows that the data for these countries don't have any outliers.

In other countries the difference is bigger and variability in ages is larger. We can see that the ranges are too high. Therefore we can't make reliable conclusions about the average age due to outliers and not enough data.

How spread the number of Nanodegree Program per occupations?

Number of Nanodegree enrolments per occupation

From this data, we can say that the majority industry that has the biggest amount of enrollments to the different Nanodegree Programs is Software Engineer and the less amount are Sales, Retired and Marketing.

Almost every industry has a higher interest in Machine Learning, Data Analyst and Artificial Intelligence Nanodegrees.
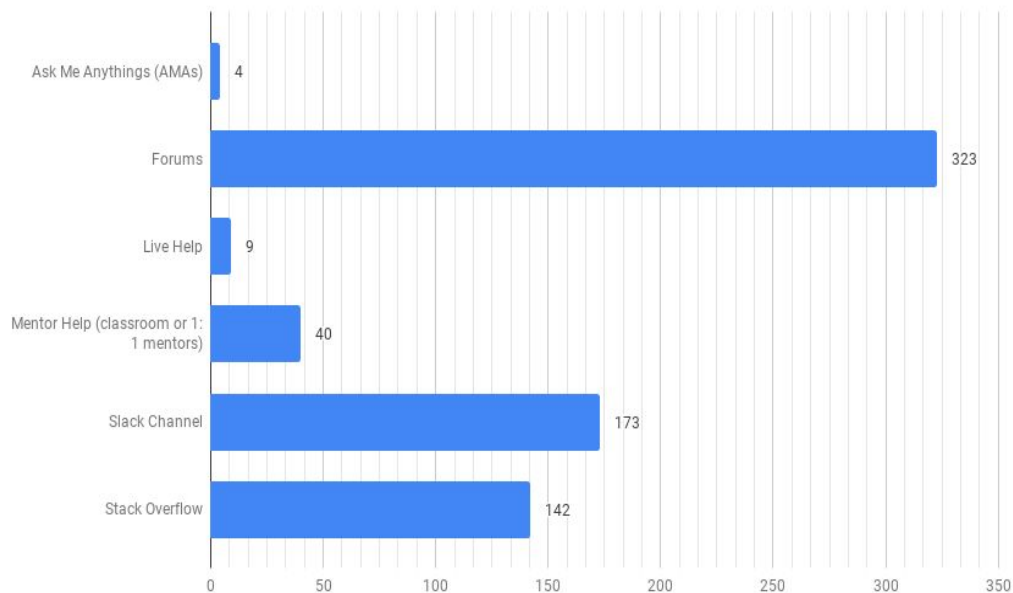
We can see that the top 3 Nanodegrees are Machine Learning Engineer, Artificial Intelligence and Data Analyst.

It is interesting that some Software Engineers take Intro to Programming Nanodegree.

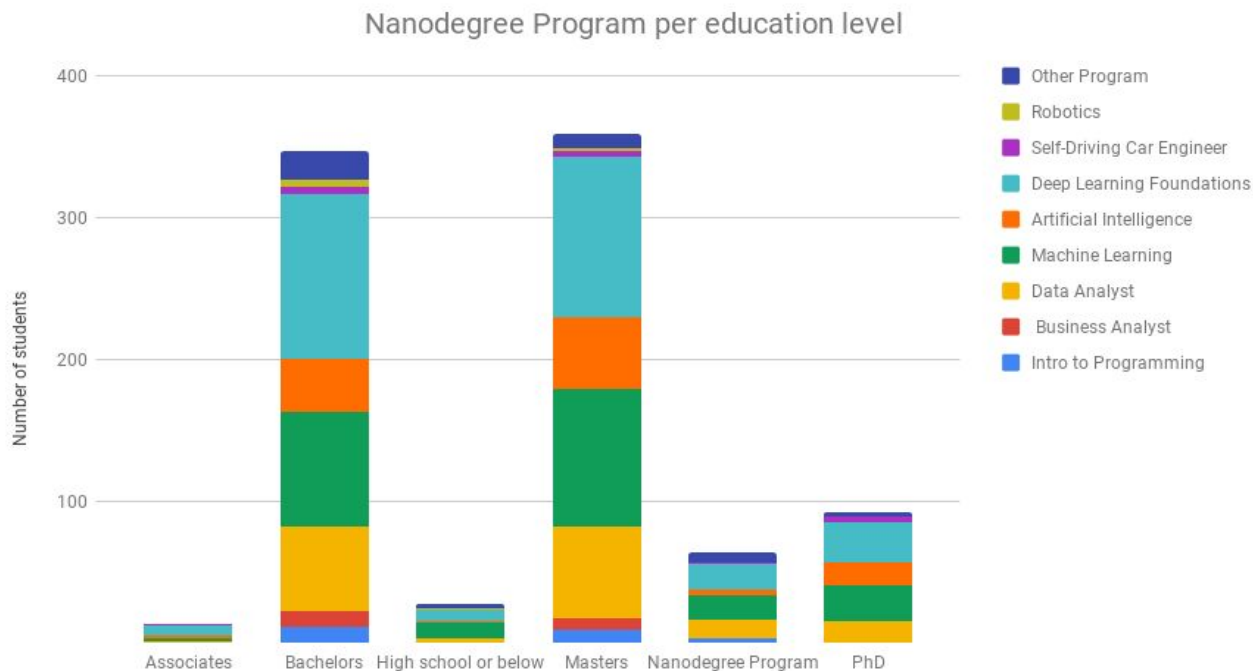# What is the most helpful tool used by students?

The most helpful tool

This bar chart shows that the majority of students choose Forums as the most helpful tool while Ask Me Anything (AMAs) chat is the less popular.

Slack Channel and Stack Overflow take the second and third place by popularity in this data set.

Mentor Help takes only 40 votes which is around 8 times less then Forums, probably because it is not free.

What is the most popular Nanodegree Programs for different education levels?

Nanodegree Program per education level

Legend:
- Other Program
- Robotics
- Self-Driving Car Engineer
- Deep Learning Foundations
- Artificial Intelligence
- Machine Learning
- Data Analyst
- Business Analyst
- Intro to Programming

Number of students

X-axis: Associates, Bachelors, High school or below, Masters, Nanodegree Program, PhD

Bachelors and Masters take the biggest number of Nanodegrees. At the same time among PHD, Associates, High school students Nanodegree Programs are not very popular.

We can say that the most popular Nanodegree is Deep Learning Foundations for all education level. Probably because Deep Learning is a trending topic nowadays.