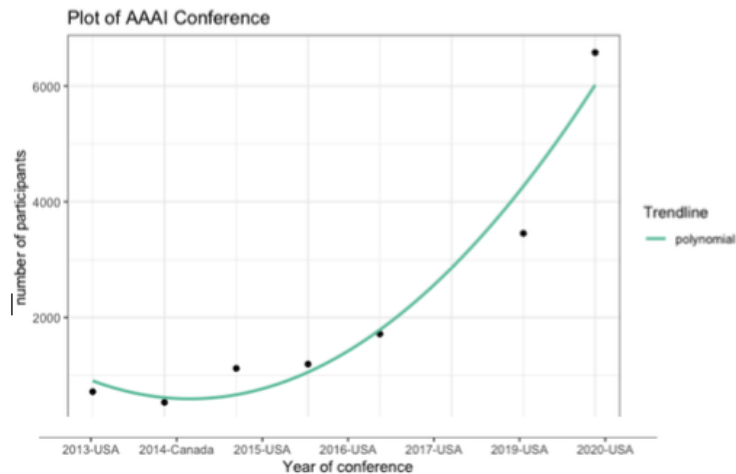


## Summary

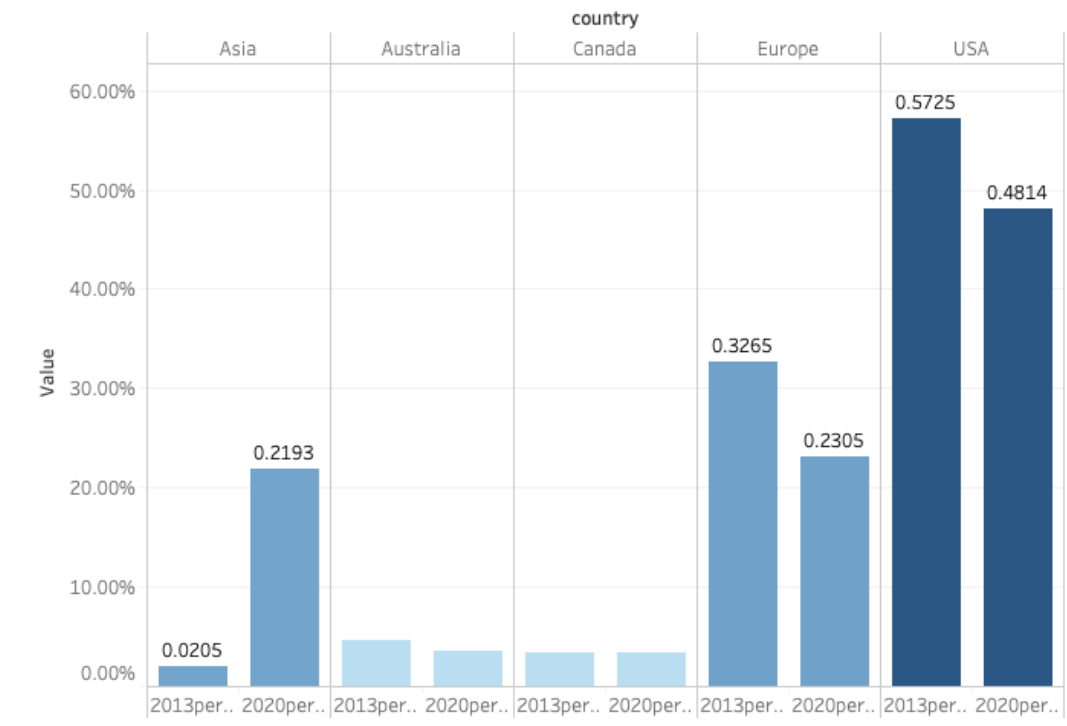
In my analysis, I explore the diversity of these conferences according to three factors: population, race and gender.

### 1. Population

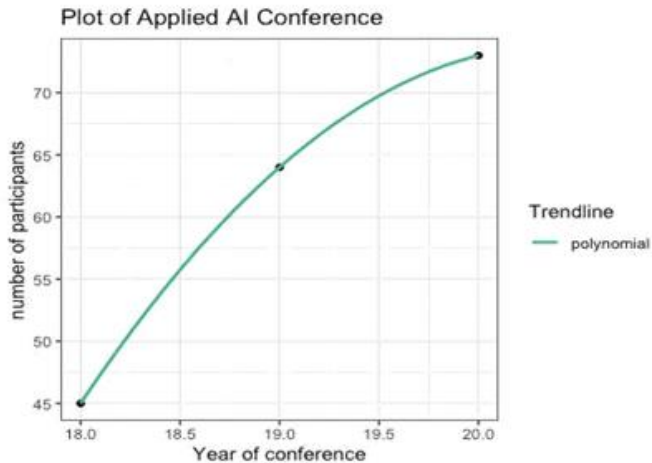


Generally speaking, there is an increasing trend of attendees in the AAAI conference from 2013 to 2020. Comparing the places where AAAI conference committee, area chairs and senior program committee's from, this bar chart indicates that participants from different countries are varying these years. Such variation can be attributed to various events that AAAI conferences hold for different group of people, in order to attract more participants to get involved in the conference.

participants' area composition



For Applied AI conference, my plot here is just showing the particular one conference at one place, San Francisco, so not only the number of participants for one conference increased, but the number of participated cities increases, which is 1 city in 2018, 6 cities in 2020, and going to be 11 cities in 2021.

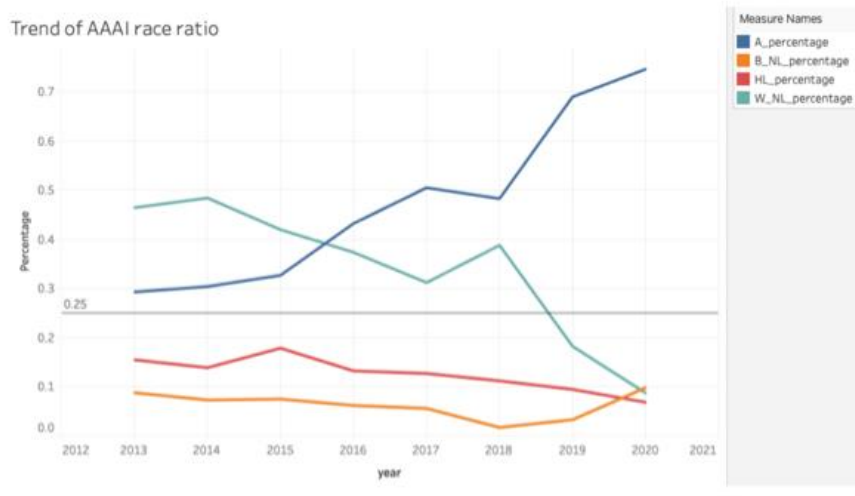


## 2. Gender

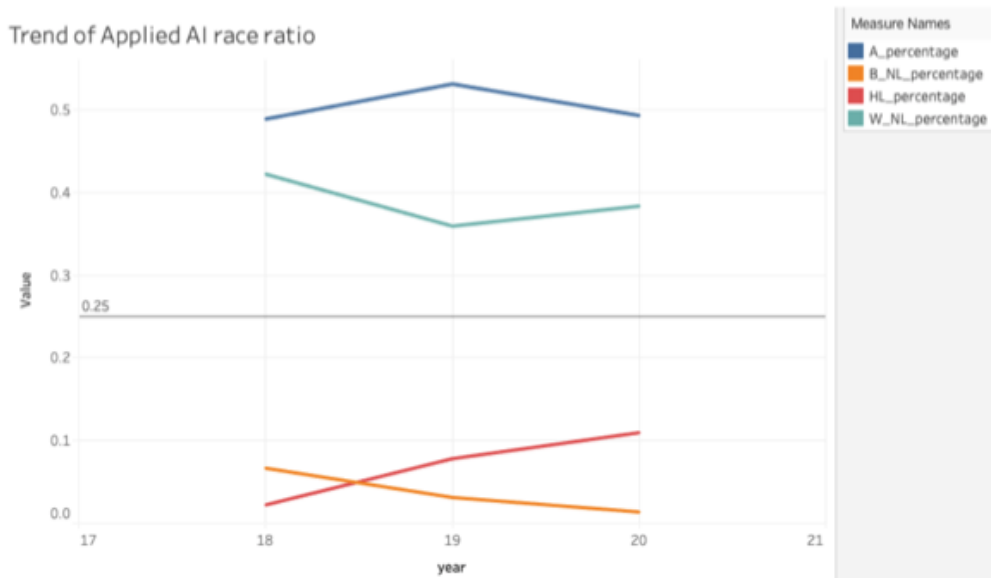
From the result of several two proportion tests, while there is not a statistically difference of the female and male ratio between 3 years, with 0.1 significance level, I found that the proportion of female in AAAI conference is statistically different from 2013 to 2020, and the proportion of female is increasing through the years. Since gender diversity most commonly refers to an equitable ratio of men and women, the results overall tells that the proportion of female is increasing these years, and contributes to the gender diversity of conference in artificial intelligence field.

## 3. Race

For AAAI conference, the number of Asian is increasing dramatically from 2013 to 2020, and the number of black, non latino also showing an increasing trend. While the percentage of White, non latino and the percentage of hispano latino is decreasing. And Asian and White always composite the main part of participants through these years.



For Applied AI conference, the number of hispano in increasing while the black, non hispano in decreasing and Asian and White, non latino still dominate the participants through 2018 to 2020. The same result can also be proven by chi-square test of independence and chi-square goodness of fit test.



The proportion of different race group is changing through these years, which implies that each race group has a chance to participate in these conferences. While there is not absolute equality in race distribution through these conferences from 2013 to 2020, this can be seen as diversity in race factor of these conferences.

Overall, in terms of diversity of conference in the artificial intelligence field, the population and gender part are becoming more diverse, and the domination of race of participant group is changing, which also shows a trend of race diversity.