Hyperiondev

TASK

Exploratory Data Analysis on the UCAS Conservatoire October Deadline Applicants Dataset

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Introduction

This dataset shows the number of applicants that applied through UCAS to Conservatoires in the United Kingdom from 2016 to 2023. It breaks these applications down into 5 groups: Year, Age, Domicile, Gender, and Level of study.

My objectives for this analyse were to see:

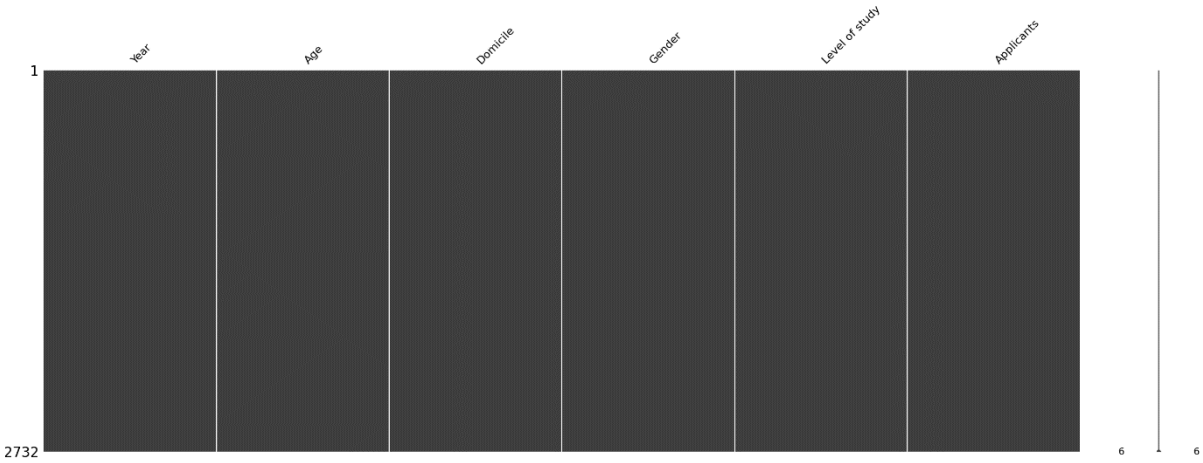
- What happens to the number of applicants over the years?
- What happens to the proportion of men and woman over the years?
- How does the market share of each domicile group change over the years?
- How does the market share of each age group change over the years?
- In 2023, on average, which gender's applicants were older?

DATA CLEANING

First, I made sure that all the variables were the correct data type. I then checked how many unique values there were in each column. I also checked the names of the values in each column to see if there were any inconsistencies within them.

MISSING DATA

I then checked for any missing values using missingno:

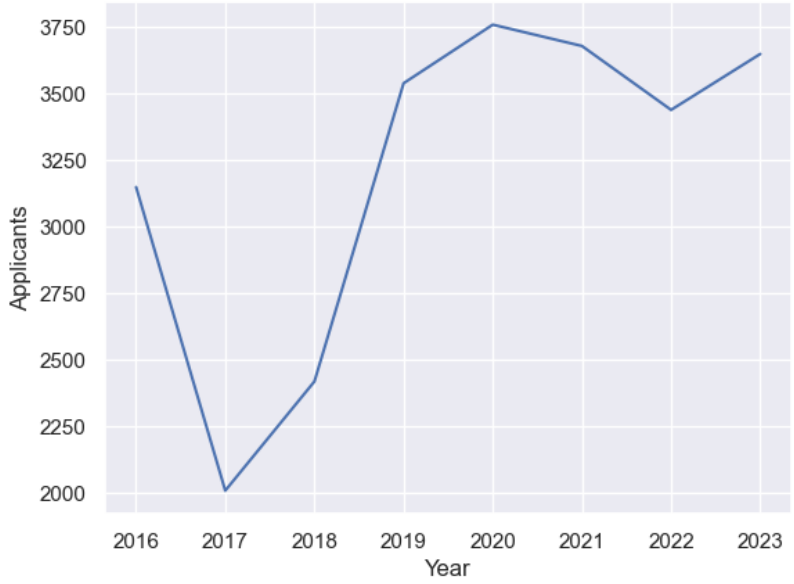


It can be seen that there are no missing values in this dataset.

DATA STORIES AND VISUALISATIONS

What happens to the number of applicants over the years?

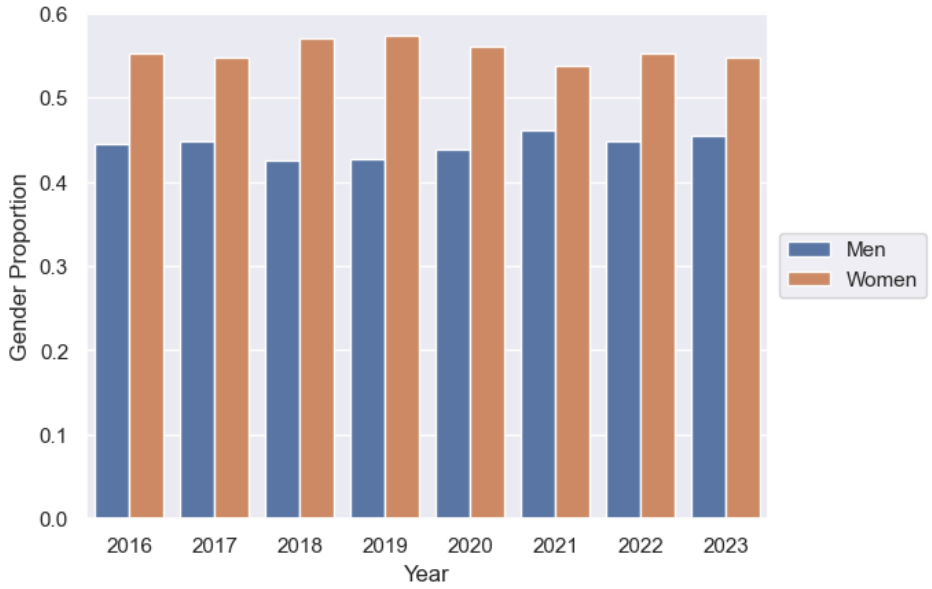
I isolated where all the variables were equal to 'All' and created a line graph of applicants by year.



It can be seen that there was a big dip in applicants from 2016 to 2017. The number of applicants rises to its peak value in 2020 (3760 applicants) and then straightens out a bit.

What happens to the proportion of men and woman over the years?

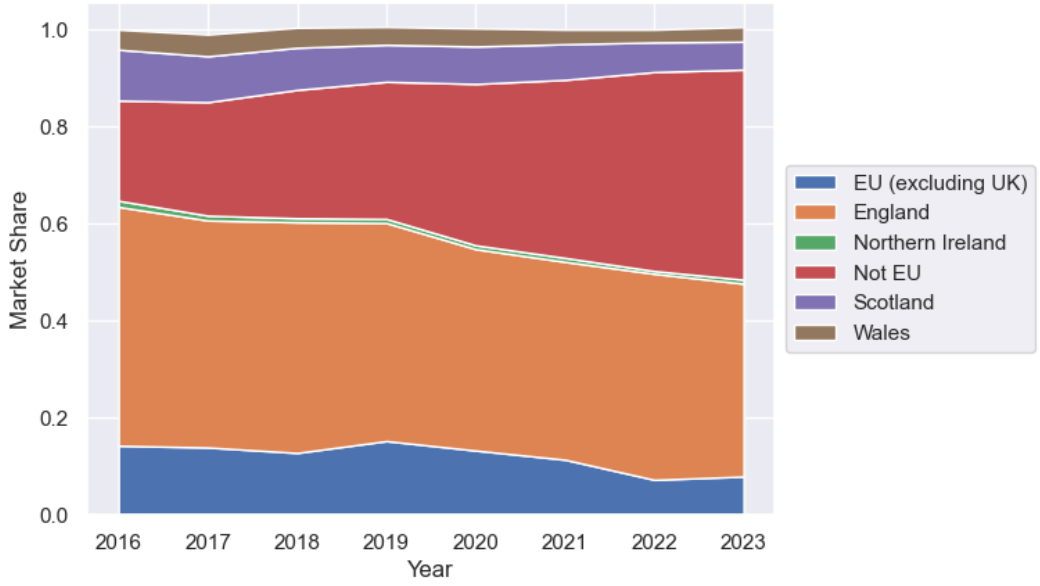
My main issue here was finding a way to compare the number of men and women applicants per year, as every year has a different number of applicants. I settled on using the proportion of applicants for each year, which is the number of applicants for each year divided by the total number of applicants for that year. I isolated the data I needed and created a bar chart showing the gender proportion by year for each gender.



Here we can see that there are more woman than men applying each year to UK Conservatoires. With the proportion gap being at it's greatest in 2018, with a gap of 14.5% between the two genders.

How does the market share of each domicile group change over the years?

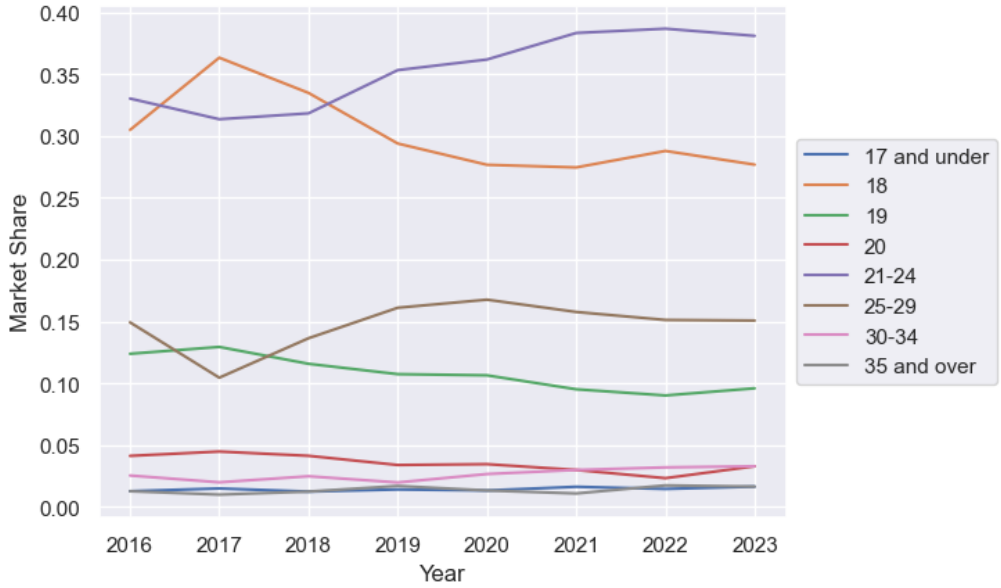
To work out the market share we can use the same formula as was used to work out the gender proportions however this time with a focus on the domicile groups. I isolated the data I needed and created a stacked area chart showing the domicile market share by year for each domicile group.



From this graph it can be seen that the domicile market share of Not EU applicants has been steadily increasing throughout the time frame whereas the market share of all other domicile groups has diminished.

How does the market share of each age group change over the years?

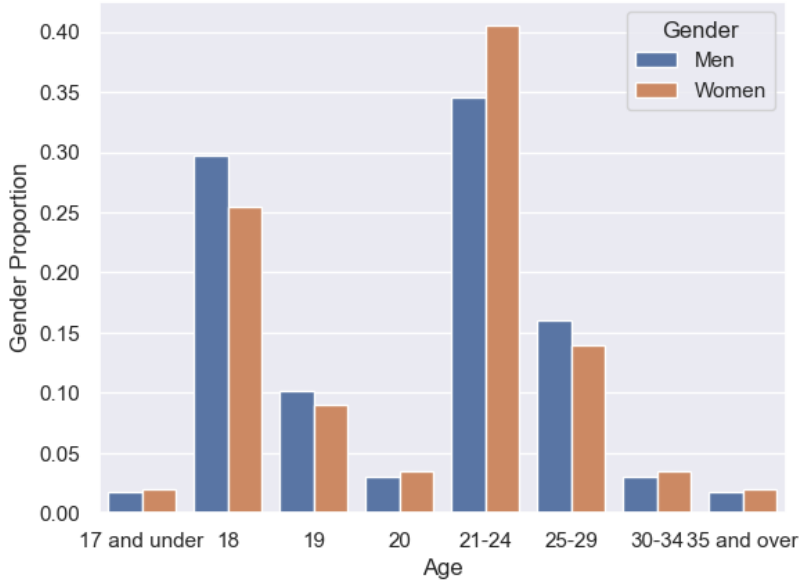
Again, I worked out the market share, only this time focusing on the different age groups. I then isolated the data I needed and created a line graph showing the age group market share by year for each age group.



It can be seen from this graph that, from 2019, the biggest age group is 21-24 year olds with 18 year olds losing the top market share in 2018. 21-24 year olds and 25-29 year olds are the only groups to grow after 2017 with every other group either having very minimal change or decreasing.

In 2023, on average, which gender's applicants were older?

Here I used the gender proportions per year again however, this time I split each gender into their age group too. I then isolated the data I needed and created a bar chart showing the proportion for each gender split into their subsequent age groups for the year 2023.



It can be seen that the women gender proportions are skewed more towards the older age groups than the men's meaning that, on average, women applicants were older than men applicants for this year.

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