

The background features abstract, overlapping green geometric shapes in various shades, including light lime green, medium green, and dark forest green, creating a modern and dynamic visual effect.

# The Diversity in College Admission: a study of Asian American applicants in Harvard Judicial Case

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# Introduction

It is clear that a selective college degree can be associated with success in the future, with “higher graduation rates and higher earnings (Long 2004). When talking about admissions to these universities, it can be extremely sensitive as the futures of many students are at stake. Recently, a lawsuit against Harvard about the discrimination of Asian applicants allowed us to gain full insight into the admission process (Arcidiacono et al. 2023). Using that data, we want to investigate the extent of Asian American discrimination during the admission process by analyzing the data and using machine learning to predict the amount of Asian American applicants that would’ve been admitted if they were White, trying to find if there is undeniable evidence towards a biased admission process or if the situation has simply been exaggerated by the media.

1. Long, Mark C. “Race and College Admissions: An Alternative to Affirmative Action?” *Review of Economics and Statistics* 86, no. 4 (November 2004): 1020-33. <https://doi.org/10.1162/0034653043125211>.
2. Arcidiacono, Peter, Josh Kinsler, and Tyler Ransom. “Asian American discrimination in Harvard admissions.” *European Economic Review* 144 (2022): 104079.

# Purpose

This study aims to examine the presence and extent of discrimination against Asian American applicants in the college admissions process, specifically within the context of the Supreme Court's decision in the case of Harvard University. We utilize publicly available data from judicial documents related to the Harvard legal case and adopt a two-step analytical approach that involves estimating an auxiliary model to capture the composite evaluation of student performance—an endogenous variable—followed by the incorporation of its predictions as covariates in our primary admissions outcome model. Through the generation of counterfactual scenarios, wherein applicants' racial backgrounds are hypothetically altered, we seek to isolate the causal impact of being Asian American on admission outcomes and showed that Asian American applicants have less admit rate compared to applicants of other races.

# Procedures

- ▶ Unveil the Harvard admission model from the judicial documents
- ▶ Analyze the breakdown demographic details and admission outcomes across races
- ▶ Reveal multi-dimensional ratings e.g. personal ratings beyond academic performance that are less favored towards Asian Americans, in other words, personal ratings are endogenous variable to the applicant race in the admission model
- ▶ Perform machine learning predictions to generate counterfactual scenarios to evaluate the differences in admission rate if Asian Americans were treated as other races

# Materials

- ▶ Applicant-level data from the Classes of 2014-2019 produced by Harvard in the SFFA v. Harvard lawsuit documents
  - ▶ Document 415-8 Plaintiff’s expert witness opening report
  - ▶ Document 415-9 Plaintiff’s expert witness rebuttal report
  - ▶ Trial Exhibit DX 042 Demographic breakdown of applicants, admits and matriculants
  - ▶ Trial Exhibit P009 Harvard Office of Institutional Research (OIR) report
  - ▶ Trial Exhibit P028 Harvard OIR report on admissions

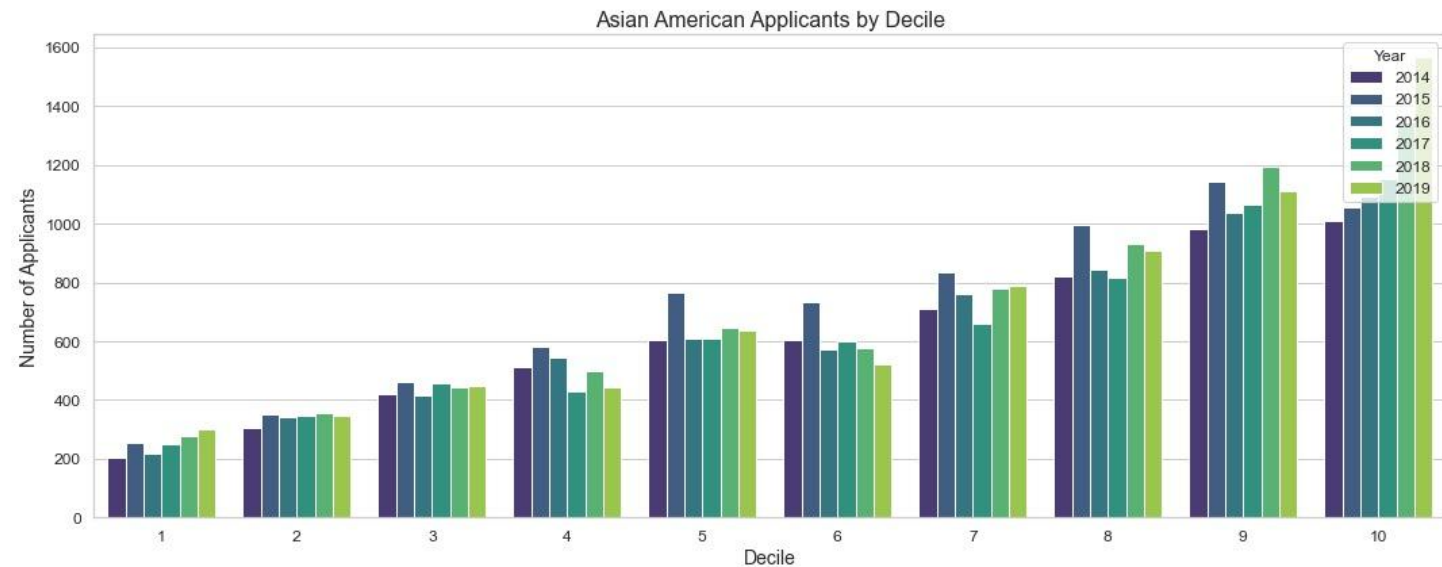
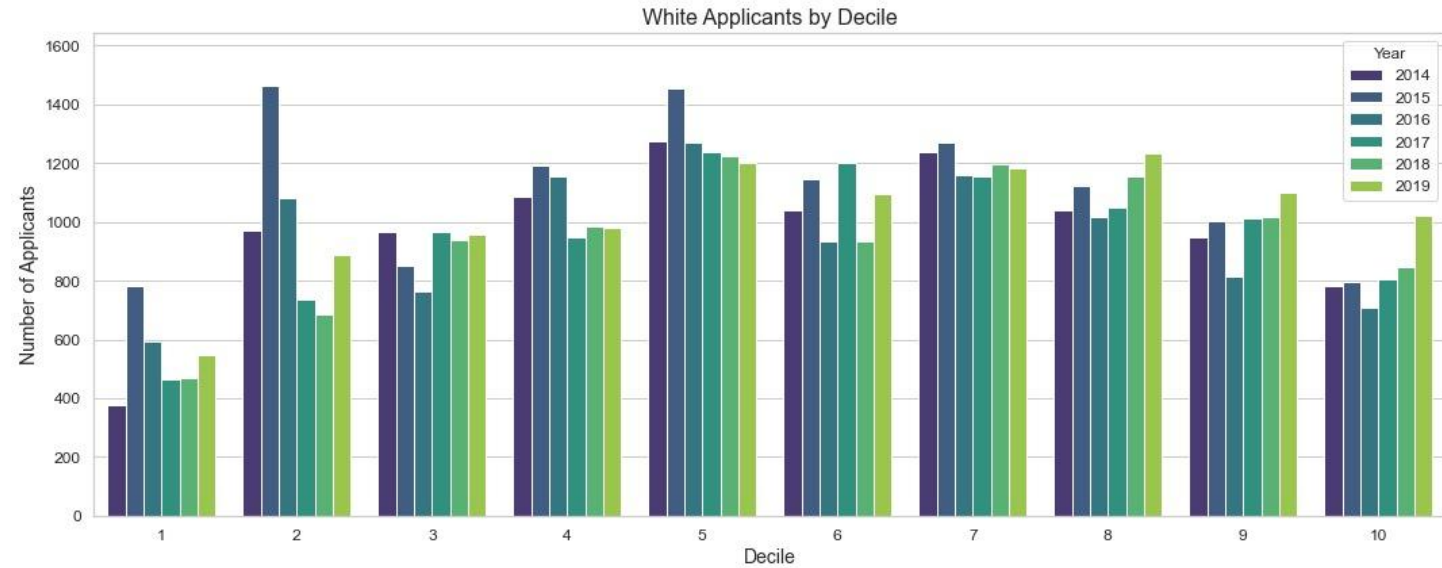
## Data

- This bar chart represents the admission outcome percentage based on Academic index deciles (For example 10 would be the highest representing top 10 percent)

Decile	African American	Asian American	Hispanic	White
1	0.044	0.000	0.000	0.000
2	0.976	0.188	0.252	0.380
3	4.880	0.748	1.892	0.422
4	11.796	0.872	5.572	1.812
5	21.148	2.034	8.610	2.372
6	27.510	2.864	13.458	4.010
7	39.474	3.874	16.694	4.452
8	44.530	5.548	22.926	7.326
9	57.286	7.002	27.372	9.950
10	57.062	12.566	29.570	14.894

# Analysis

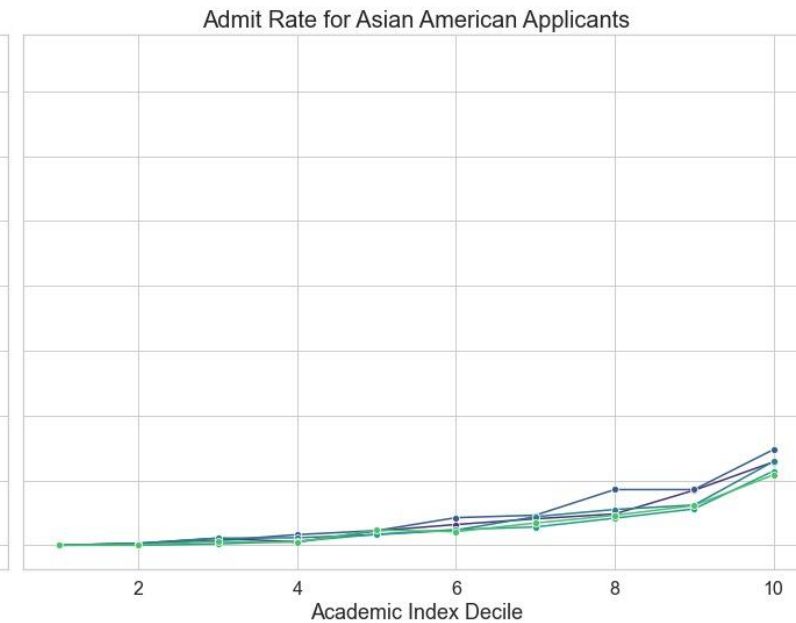
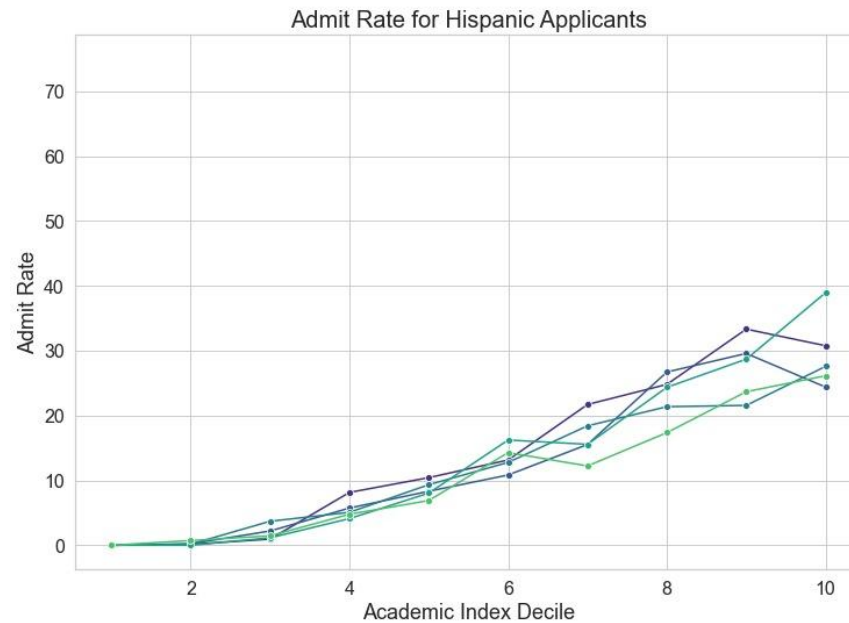
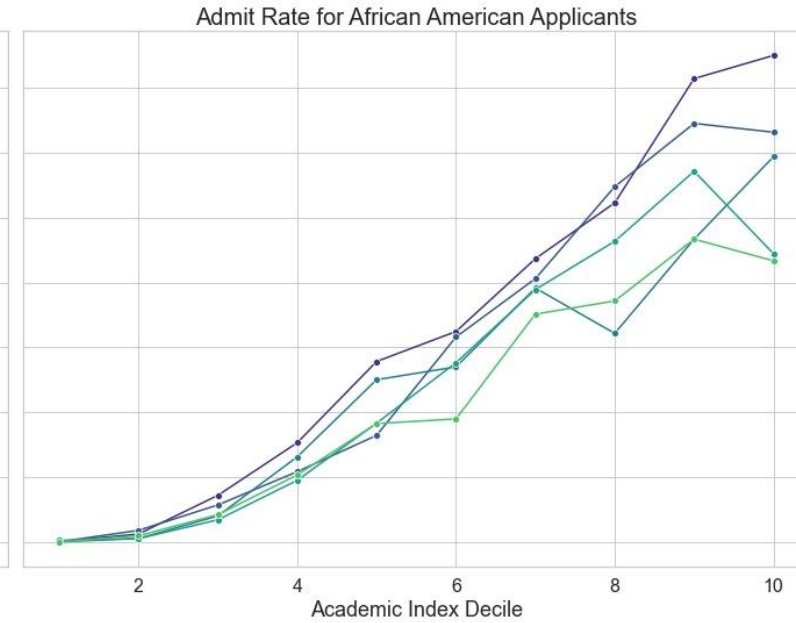
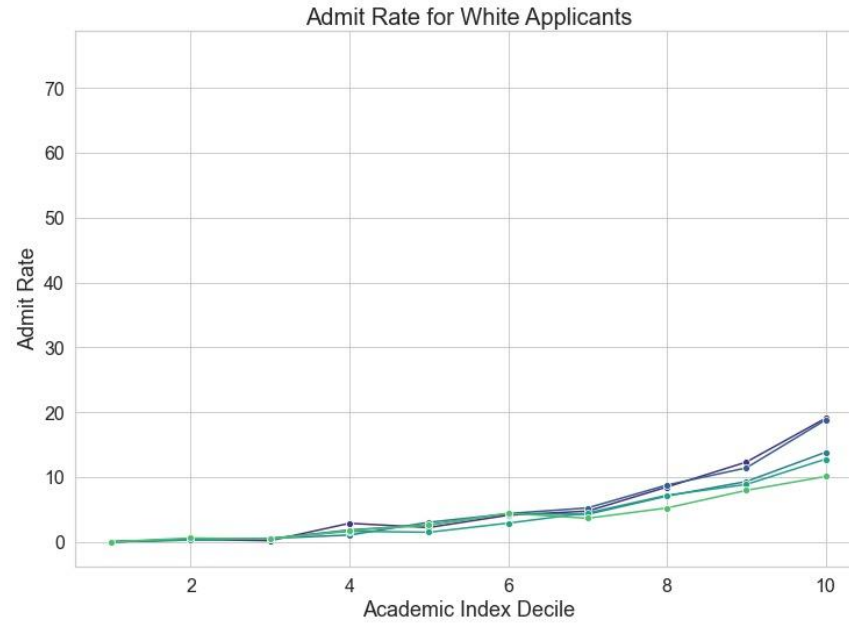
- ▶ These two tables represent the amount of applicants in each academic decile for both races
- ▶ The figure shows that Asian American applicants tend to be more academic competent, yet their admission rate is lower than applicants compared to White



# Analysis

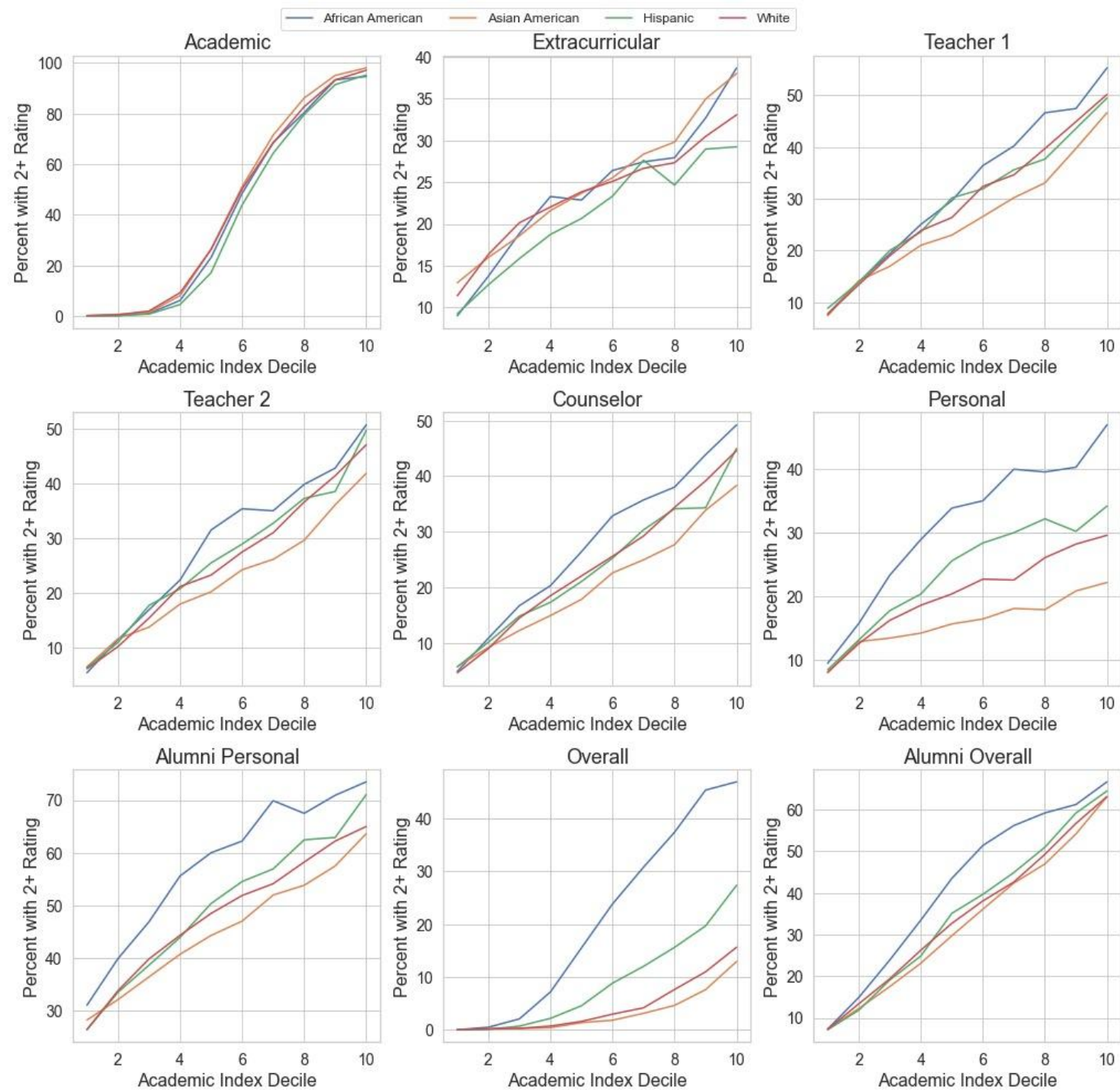
- ▶ These charts represent the admission rate for each race's academic decile
- ▶ As expected, admission rates tend to increase with the applicants' academic performance. However, Asian Americans do not see comparative admission rate to the applicants of other races, had if they have the same academic performance.

— 2015 — 2016 — 2017 — 2018 — 2019



# Analysis

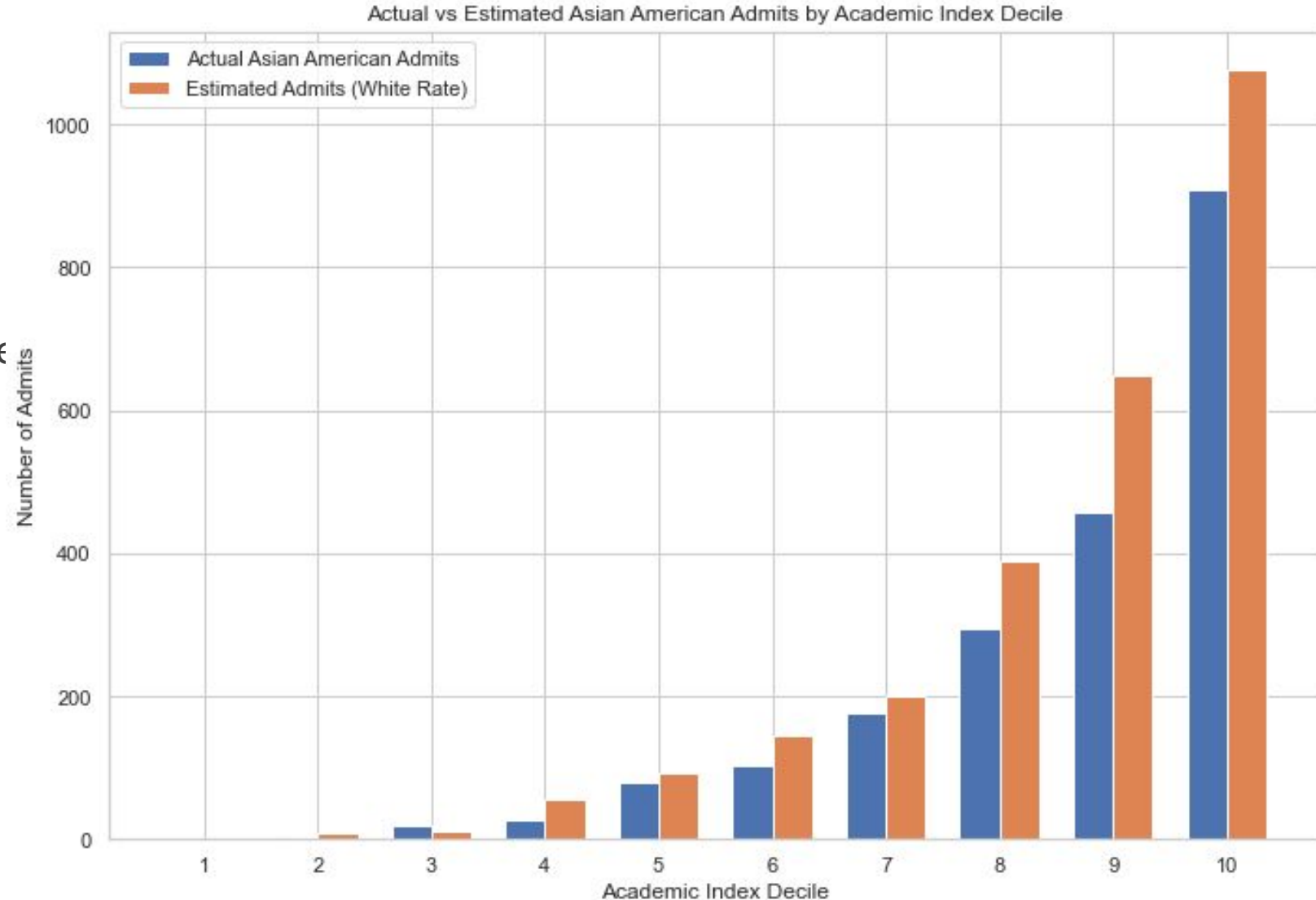
- ▶ These charts represent the percentage of applicants that receive ratings higher than two for each race and criteria.
- ▶ Harvard admission model is built on the overall profile ratings that include multi-dimensional ratings, such as academic rating, extracurricular, athletic, and personal ratings
- ▶ Unlike academic/extracurricular performance, personal ratings show strong discrepancies between Asian Americans and other races. In other words, non-academic ratings tend to be associated with the races.





# Analysis

- ▶ Through the counterfactual scenarios generated from machine learning model, we illustrate theoretical upper bounds of Asian Americans if they were treated with the same admit rate as White, and demonstrate how many more admission they are going to get.
- ▶ This would translate into 27% more of admissions, especially for students in the higher range of academic performance (Academic Index Decile  $\geq 8$ ).



# Summary

Through our analysis, we found that if Asian American applicants were treated the same as White applicants, they would have 27% more admissions. At first glance, this statistic points to significant discrimination; however, the context of the applicant pool's academic standing complicates this narrative. There are a lot more Asian American students in the top decile of the academic index. In the top 10% of Academic applicants (10 decile) there were 7225 Asian American compared to the 4962 White applicants. When we actually look at the percentage of admits of these applicants in the 10th decile the Asian American admit rate was 12.566% and the White admit rate was 14.894%. Only a difference of 2.32%. Therefore, of the most qualified applicants there was only a 2.32% disadvantage of being Asian American compared to White. However, because of the larger number of qualified Asian American applicants, the number of admittees will show a large discrepancy. This illustrates a broader trend of academic excellence within the Asian community. Yet, this same excellence becomes a double-edged sword when viewed through the subjective lens of personal ratings by admissions officers. Unlike academic scores we cannot numerically analyze personal ratings as they are subjective and given by Harvard admission officers. We will never know if the trend of lower personal ratings in Asian American applicants is a reflection of individual shortcomings or a manifestation of systemic bias.

# Diving Deeper and Personal Insight

As an Asian American when shown statistical difference in college admissions it's natural to see it as possible discrimination. The initial reaction might lean towards feeling victimized, especially when the data seemingly underscores a narrative of bias. However, looking deeper into how college admissions work offers a more rounded perspective. I have experienced first hand how the emphasis on academic achievement runs deep in Asian American families. While striving for excellence in school is commendable it can lead to a lack of diversity among applicants from our community. Colleges consider more than just test scores or extracurriculars when reviewing applications. This is where the concept of 'personal ratings' comes into play helping admission officers grasp the qualities and potential contributions of each applicant to campus life. It's not necessarily about discrimination or wanting to penalize candidates for their focus on academics. Instead, it acknowledges the range of attributes needed for a student body. It is also crucial to recognize that the narrative of 'everyone having the same story' is an oversimplification of Asian Americans. At the end of the day, we will never know if Asian Americans simply tend to have worse personal ratings or if it is a systematic bias. Thus, the real challenge lies in both applicants and admissions officers digging deeper into these stories ensuring that every person's journey is recognized and appreciated for its aspects.

# Future Work

- ▶ Combine qualitative studies to add additional perspective to the context, e.g. through surveys to stakeholders such as applicants, admission officers, etc.
- ▶ Perhaps using natural language processing to analyze the language and sentiment of recommendation letters or personal ratings of applicants for patterns that might indicate bias based on race, gender, or socioeconomic status. This could offer insights into another subjective aspect of the admissions process.