

# Are CS Faculty Members Diverse Enough?

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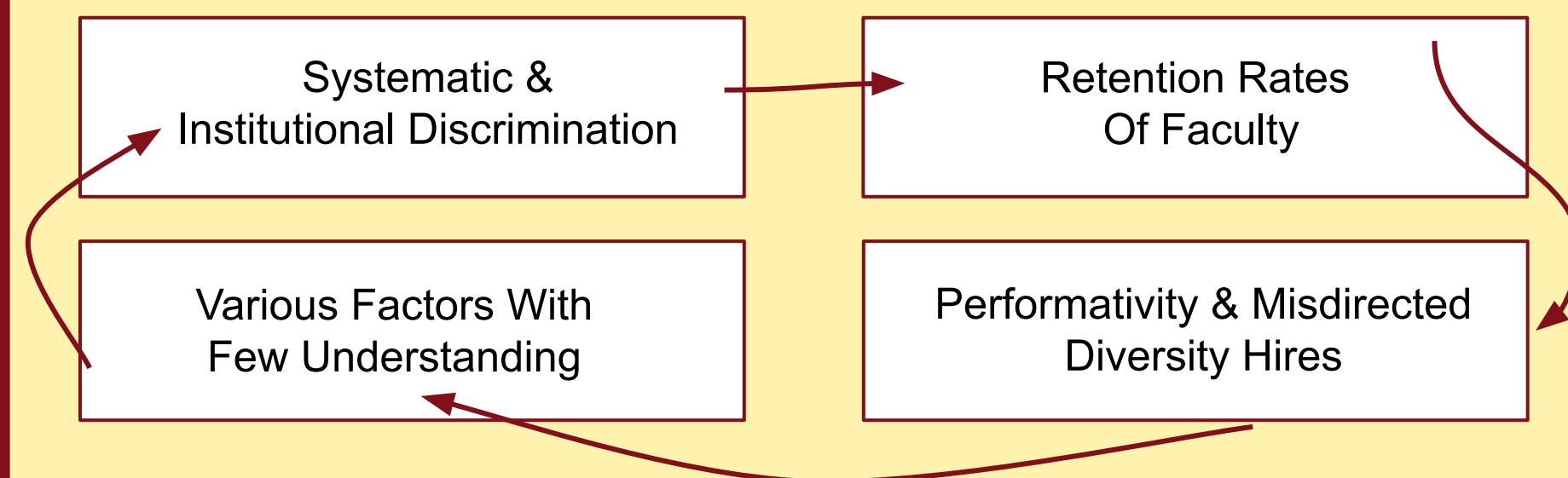
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## Problem Statement

Although universities enact various Diversity, Equity, and Inclusion programs and diversity hires, are CS faculty members increasingly becoming more diverse?

### Challenges



## Architecture & Overview

### 1) Data Collection & Analysis

Create a dataset of 1,000 CS faculty members from top 20 universities. Information including University, name, faculty position, hiring year, gender, race, papers published, and number of citations were collected.

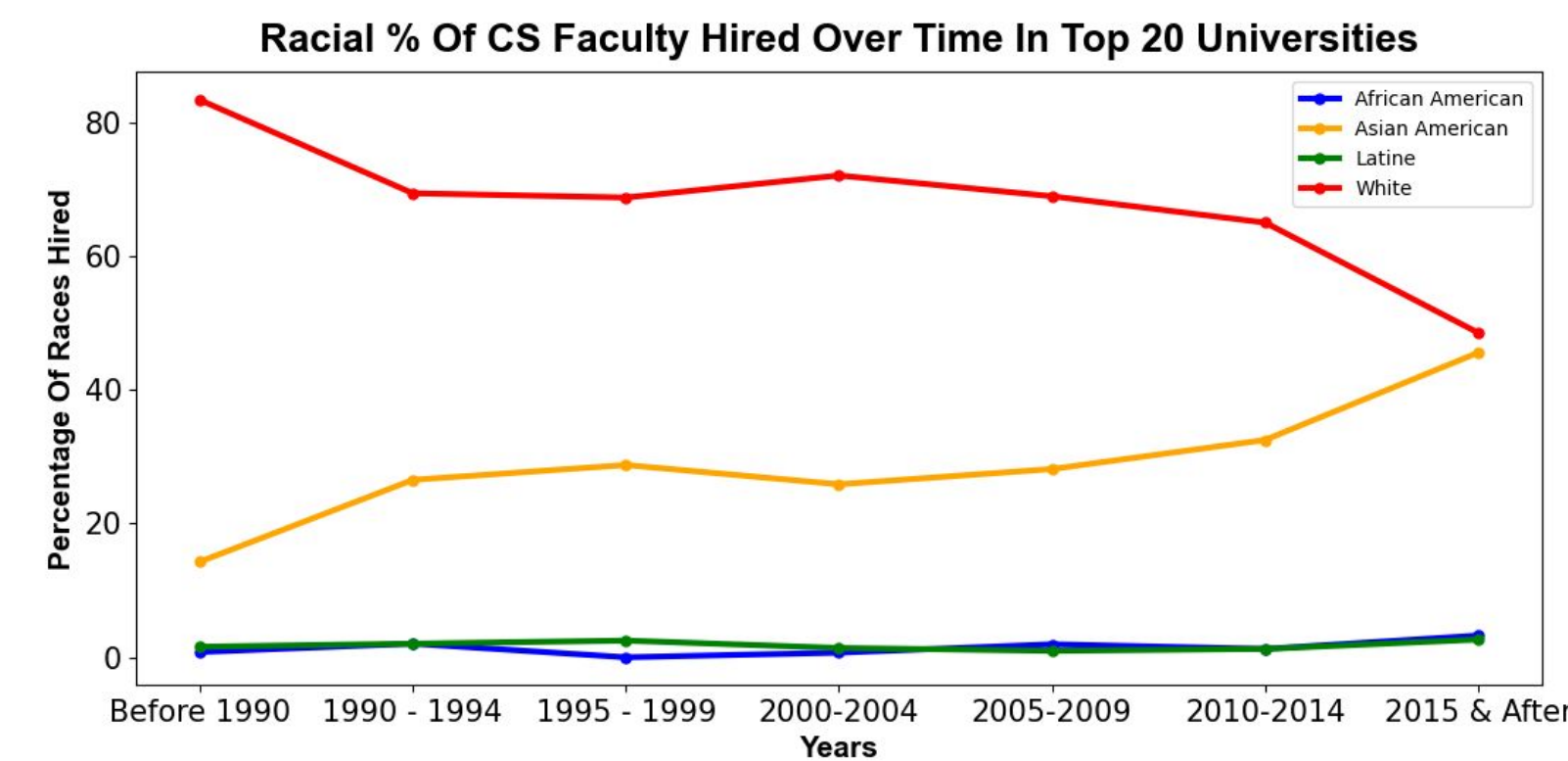
UNIVERSITY	FULL NAME	TYPE OF PROFESSOR	GENDER	RACE	HIRING YEAR	NUMBER OF PAPER + OF CITATIONS
Massachusetts Institute of Technology	Peter Sabatini	Professor	M	White	1975	373 2020
University of California Berkeley	David Sussman	Professor	M	White	1963	127 7728
University of California Berkeley	Lawrence Kinross	Professor	M	White	1963	426 5276
Massachusetts Institute of Technology	Mark Whalley	Professor	M	White	1964	705 8007
Harvard University	Andreas von Stearn	Professor	F	White	1963	138 7542
Massachusetts Institute of Technology	David Clark	Dean or Higher	M	White	1966	429 2940
Northwestern University	Arthur Sacc	Associate	M	White	1966	49 1113
University of Michigan	James R. Martin	Professor	M	White	1967	126 2124
Stanford University	David Sussman	Professor	M	White	1967	397 4168
Harvard University	Harry K. Lewis	Professor	M	White	1968	16 762
Stanford University	Donald Swenberg	Professor	M	White	1968	126 1807
Stanford University	Robert C. Condon	Dean or Higher	M	White	1968	184 3423
Massachusetts Institute of Technology	Albert Meyer	Professor	M	White	1969	154 4884
University of California Berkeley	John Heil	Professor	M	White	1969	127 11024
Columbia University	Jonathan L. Gross	Professor	M	White	1970	181 938

### 2) Surveying Faculty

Design a questionnaire to gain information from identity groups on importance of problems and possible solutions. *Additional question:* do white males responses differ from minorities?

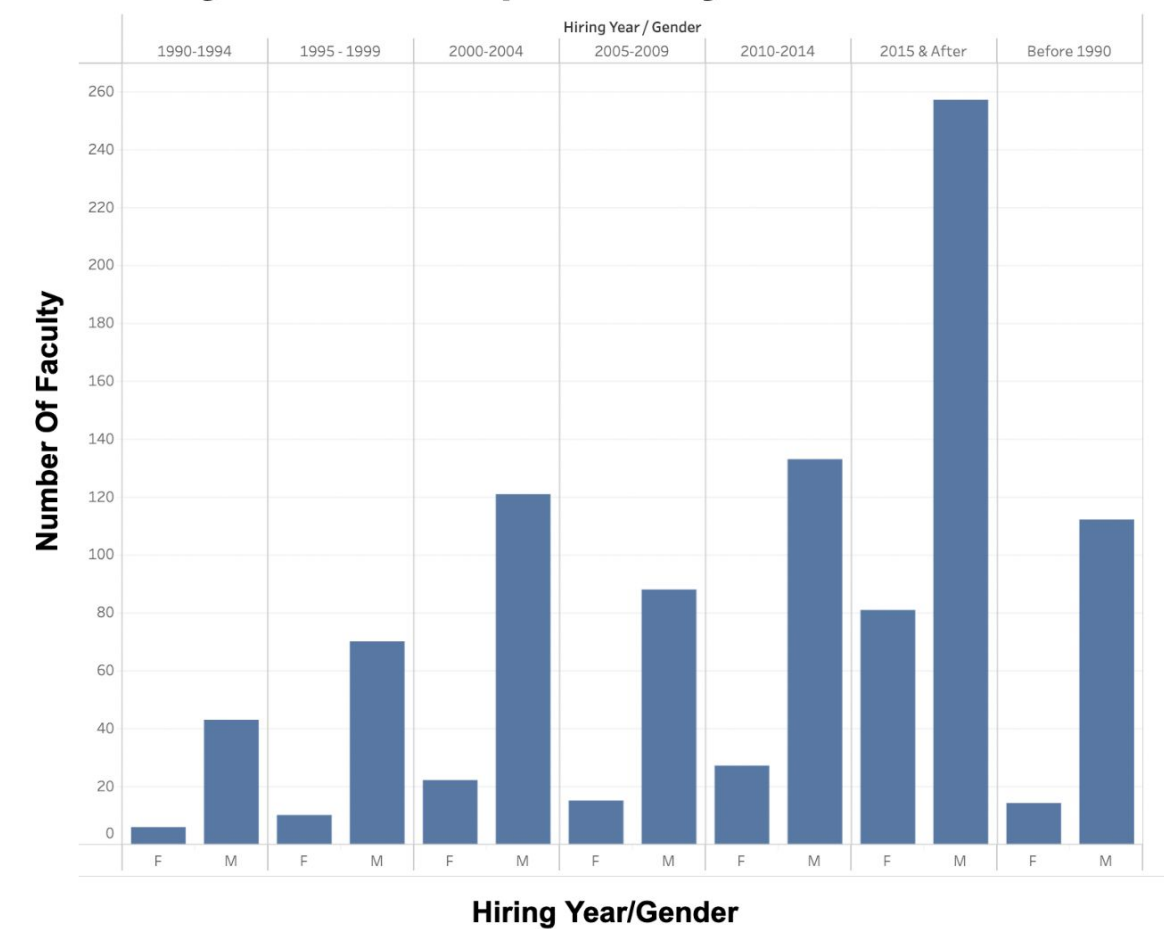
### 3) Recommendations

Using data and responses, cultivating recommendation and possible solutions for the problem while considering hiring process, retention, etc.



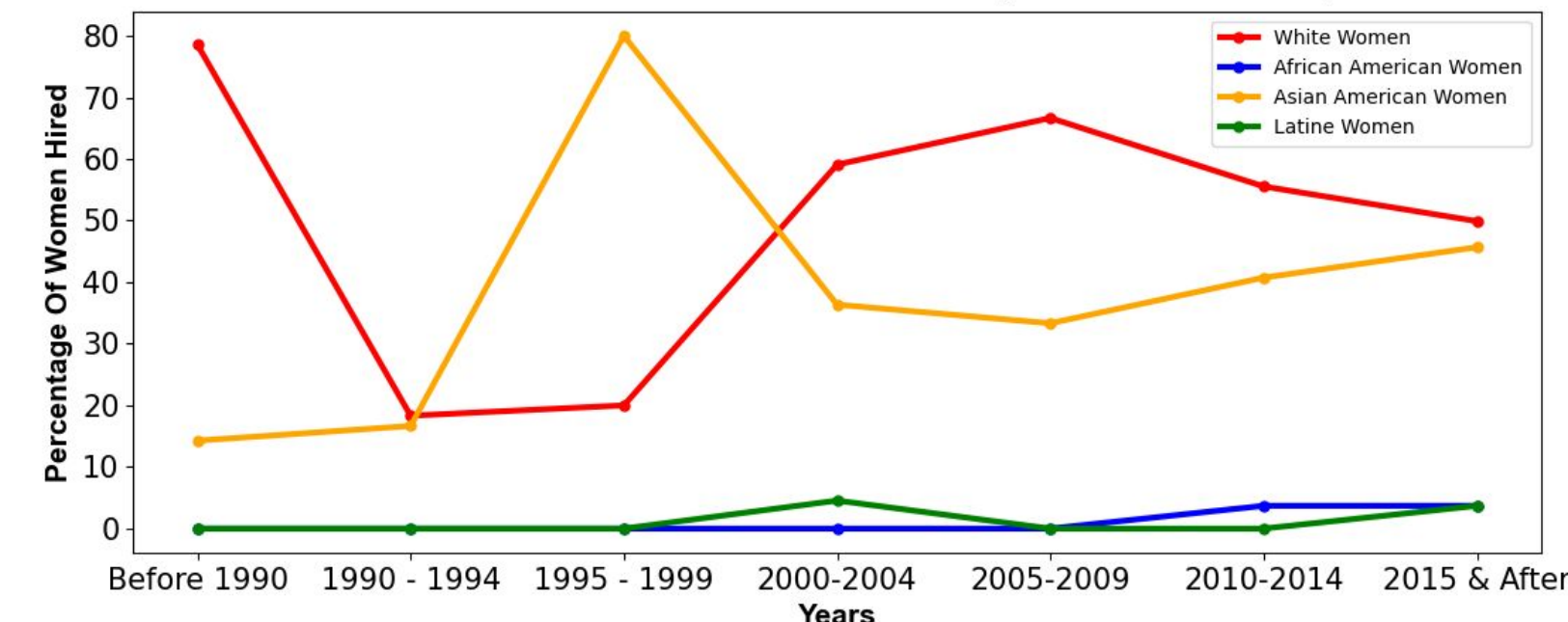
Takeaway: Compared African Americans and Latine faculty, Asian Americans are hired more often.

### Faculty Gender Comparison By Year Period



Takeaway: While hiring of women has increased, it is no where compared to the amount of males.

### Racial % Of Women Hired Out Of CS Women Faculty Over Time In Top 20 Universities



Takeaway: White women/Asian women are more likely to be hired than African American/Latine women

## Key Insights

- Hypothesized that Black women would show the least progression in hiring rates, however Latine women also follow a similar hiring trend.
- Compared to other racial minorities, Asian Americans' hiring rates are highest. Brings up the question of the model minority myth and its influences on diversity hiring targets and past surveys of workplace climates.
- Around 1990s, companies started understanding the importance of diversity. There are still disproportionately fewer women, although the amount has increased over the years.

### Limitation Of Dataset

- Latine people can identify as White through the US census.
- Faculty who might be nonbinary or transgender are unknown.

### Relevant Papers

Blackwell, Lauren V., Lori A. Snyder, and Catherine Mavriplis. "Diverse Faculty in STEM Fields: Attitudes, Performance, and Fair Treatment." *Journal of Diversity in Higher Education*, vol. 2, no. 4, 2009, pp. 195-205.

Takeaways: Diversity must be continuous; "token diversities" can result in mental health and retention rates decline. In a survey of faculty at public universities, Asian Americans reported the highest positive satisfaction, lowest turnover rates, and lowest discrimination.

Smith, Daryl G, et al. "Interrupting the Usual: Successful Strategies for Hiring Diverse Faculty." *The Journal of Higher Education*, vol. 75 no. 2, 2004, p. 133-160. *Project MUSE*.

Takeaways: Examines the departmental search committee process and those conditions that lead to hiring diverse faculty in terms of race/ethnicity and gender. 5% of regular hires, hires for positions without a diversity indicator and without the use of a special hire, resulted in the hiring of an underrepresented faculty member. 65% of those hired with diversity indicators or special hires were White.

P.G. Devine, P.S. Forscher, W.T. Cox, A. Kaatz, J. Sheridan, M. Carnes. "A gender bias habit-breaking intervention led to increased hiring of female faculty in STEM departments." *Journal of Experimental Social Psychology*, 73 (2017), pp. 211-215.

Takeaways: Study that provided participants with a test, evidence, case studies, and more information about gender bias in the workplace and encouraged them to keep it in mind in their professional life. A second study with control and intervention group to see who they would hire, more women were hired by participants from the first study in comparison to the second.

## Evaluation

The research is currently in phase 2, surveying faculty. We recently finished the IRB approval process and will begin receiving responses on the various questionnaires. After phase 2, we will use the information to compare with frameworks for current interventions and create recommendations or solutions to address the problem statement.