



BPCnet BPC Indicators Report 2024

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Author: Burçin Campbell

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Center for Evaluating the Research Pipeline
Computing Research Association
1828 L St NW, Suite 800
Washington, DC 20036
e. cerp@cra.org

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About CERP and BPCnet

BPCnet is a project of the Computing Research Association (CRA) and includes the BPCnet.org resource portal and various community engagement activities. The goal of BPCnet is to provide a network and curated resources to the computing community to further the efforts to broaden participation in computing. BPCnet has been supported by the National Science Foundation (CNS 1830364, CNS-1940460, CNS-2032231, and CNS 2335072).

CRA's Center for Evaluating the Research Pipeline (CERP) is a research and evaluation center whose mission is to promote diversity in computing. CERP serves as a resource for the computing community by supporting efforts to recruit and retain individuals considered underrepresented in computing or historically marginalized. More generally, CERP strives to inform the computing community about patterns of entry, subjective experiences, persistence, and success among individuals involved in academic programs and careers related to computing.

CERP was created by the Committee on the Status of Women in Computing Research (CRA-W)/Coalition to Diversify Computing (CDC) Alliance through a National Science Foundation grant to the Computing Research Association (CNS-1246649).

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For more information about BPCnet, visit bpcnet.org and about CERP, visit <http://cra.org/cerp/>.

Center for Evaluating the Research Pipeline
Computing Research Association
1828 L St NW, Suite 800
Washington, DC 20036
e. cerp@cra.org



Executive Summary

The report contains summaries of data on computing degrees awarded from Integrated Postsecondary Education Data System (IPEDS) and on early career faculty from the CRA Taulbee Survey. The focus of this report is to display racial/ethnic and gender composition of individuals who were awarded higher education degrees in computing and early career faculty in higher education. All data are displayed by gender only, race/ethnicity only, and for the intersection of gender and race/ethnicity.



Key Highlights for Computing Degrees Awarded

	American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Two or more races	Women
Associate's	A steady increase from 25% in 2013 to 36% in 2022. Primarily driven by increase in degrees awarded to Hispanic students.	A decrease early on and then a reversal in the trend in the past few year.
Bachelor's	A minor increase from 23% in 2013 to 28% in 2022. Also primarily driven by increase in degrees award to Hispanic students.	Slight increasing trend from 19% in 2013 to 26% in 2022.
Master's	No major change staying at 24% in 2013 and 27% in 2022.	Increasing trend from 26% in 2013 to 35% in 2022.
Doctoral	A steady increase from 11% in 2013 to 20% in 2022.	Slight increase from 20% in 2013 to 28% in 2022.



There have not been any observable trends in the demographic breakdown of tenure track Assistant Professors' demographic composition in terms of the racial/ethnic and gender identities. That said, it is important to note that data presented here are limited to doctoral degree granting institutions.

Introduction

Measuring and tracking representation in computing is a critical part of all efforts in broadening participation in computing. This report, produced by Computing Research Association (CRA)'s Center for Evaluating the Research Pipeline (CERP), is made available to the community by BPCnet to provide a collection of BPC indicators focusing on higher education. This report is a pilot version of a report that will be made available annually on BPCnet.org.

The report contains summaries of data on computing degrees awarded from Integrated Postsecondary Education Data System (IPEDS) and on early career faculty from the CRA Taulbee Survey. The focus of this report is to display racial/ethnic and gender composition of individuals who were awarded higher education degrees in computing and early career faculty in higher education.

Data Sources

Data on degrees awarded (2013–2022) is obtained from IPEDS for the subset of computing related CIP codes. The full list of CIP codes included in this report is provided on Table 17 in the Appendix and are based on by Zweven & Bizot (2016) and match the codes used on BPCnet.org Statistics and Data Hub as of the writing of this report. IPEDS is a data system of the National Center for Education Statistics, a part of the Institute for Education Sciences within the United States Department of Education. According to the IPEDS website, “The completion of all IPEDS surveys is mandatory for institutions that participate in or are applicants for participation in any federal student financial aid program (such as Pell grants and federal student loans) authorized by Title IV of the Higher Education Act of 1965, as amended (20 USC 1094, Section 487(a)(17) and 34 CFR 668.14(b)(19)).” The dataset used in this report is provided by BPCnet Statistics and Data Hub, and filters IPEDS data for institutions that are ‘Public’ or ‘Private not-for-profit’ and is ‘Four or more years’ or ‘At least two but less than four years’.

Data on early career faculty demographic characteristics is taken from CRA Taulbee Survey annual reports between 2013 and 2023. CRA Taulbee survey is sent to all departments that grant doctorates in Computer Science (CS), Computer Engineering (CE), and Information (I) in North America. Each year a subset of these departments completes the survey. The annual reports are generated for all departments that complete the survey in that year. Hence, Taulbee data presented in this report may contain information from slightly differing set of institutions.

Data Analysis and Display Methodology

All data are displayed by gender only, race/ethnicity only, and for the intersection of gender and race/ethnicity. To facilitate legibility of the figures, racial/ethnic groups that tend to be in the numerical majority (Asian, White) and minority (American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Two or more races) in computing are presented separately on all figures that present information broken down by race/ethnicity.

Gender is recorded as “women” and “men” in the IPEDS dataset and “female”, “male”, “non-binary/other” in the Taulbee data. However, “non-binary/other” option was added to the Taulbee Survey starting with the year 2020 and, therefore, is excluded from analysis in this report.

Racial and ethnic identities included in IPEDS are American Indian or Alaska Native, Asian, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Two or more races, and White. Taulbee Survey also includes a similar list of racial/ethnic identities: American Indian or Alaska Native, Asian, Black or African-American, Native Hawaiian/ Pacific Islander, White, Multiracial, not Hispanic, Hispanic, any race. Both data sources also include a “Nonresident alien” grouping, and racial/ethnic identities are not provided for non-US residents. Therefore, non-US residents are excluded from analysis while calculating percentages for racial/ethnic categories in this report. Percentages of Non-US Residents are listed on Table 2 and Table 13 for reference.

Both data sources also list an “unknown” or “not reported” option for both gender and race/ethnicity to indicate missing data. These are also excluded from analysis in this report.

All data summaries used to generate the figures in this report are provided in the Appendix Table 2 through Table 16 in tabular format for easier reference to specific numerical values. Table 1 and Table 12 in the Appendix also show the sample sizes for the IPEDS and Taulbee Survey data, respectively.

References to changes in percentages throughout the interpretive text of this report are numerical observations of trends and are not statistically tested.

Computing Degrees Awarded

This section displays summaries of Associate's, Bachelor's, Master's, and Doctoral degrees awarded in the field of computing using data from IPEDS.

Associate's Degrees

The analysis presented here show that there has been a steady increase (25% in 2013 to 36% in 2022) in the overall percentage of Associate's degrees students who are American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, or identify with two or more races. This increase seems to be driven primarily by Hispanic students (both women and men).

In terms of gender, the data show that while there was a decrease in percentage of Associate's degrees in computing awarded to women, the past few years have seen a reversal of this trend. As of 2022, the percentage remains approximately the same it was in 2013.

Figure 1 – Associate's degrees awarded in computing by race/ethnicity (American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Two or more races) (2013 - 2022)

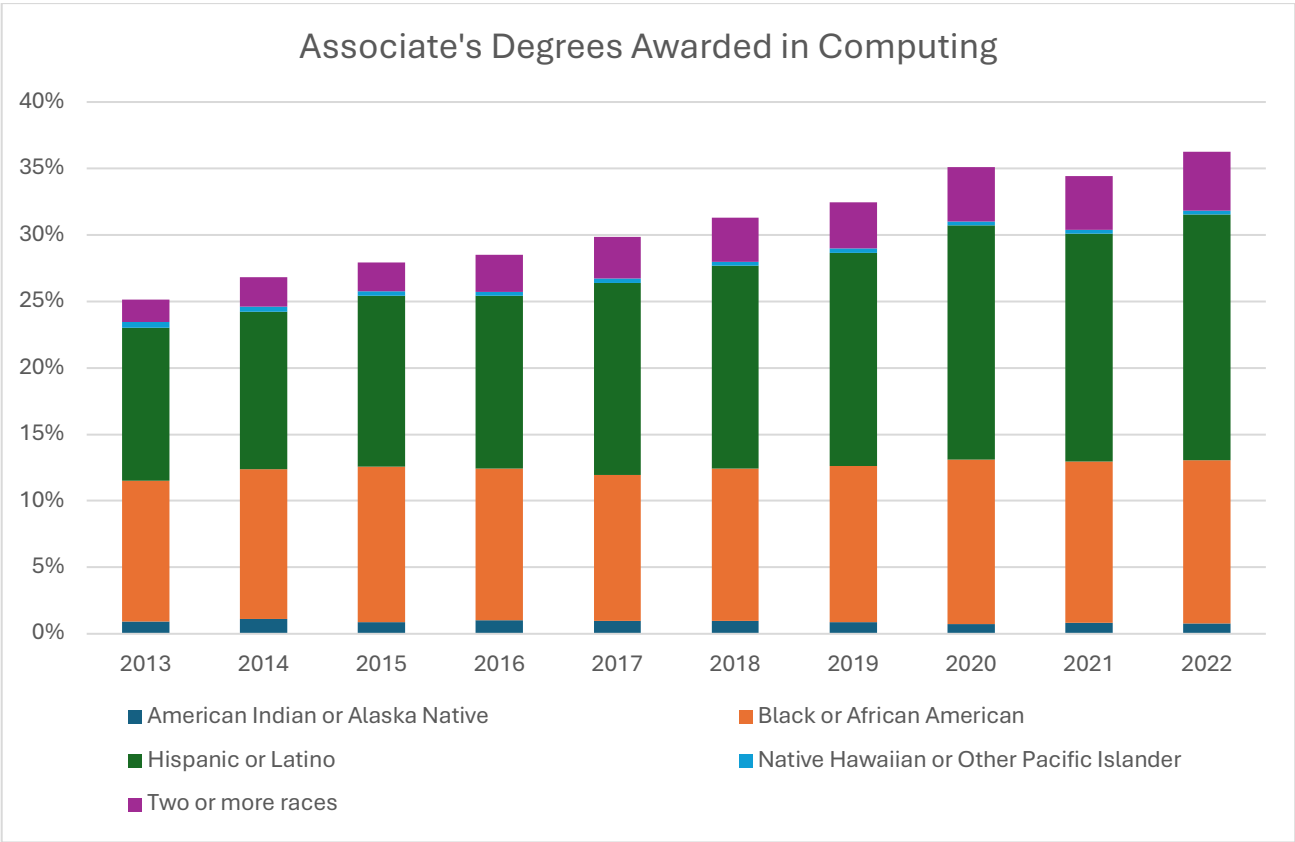


Figure 2 - Associate's degrees awarded in computing by race/ethnicity (Asian, White) (2013 - 2022)

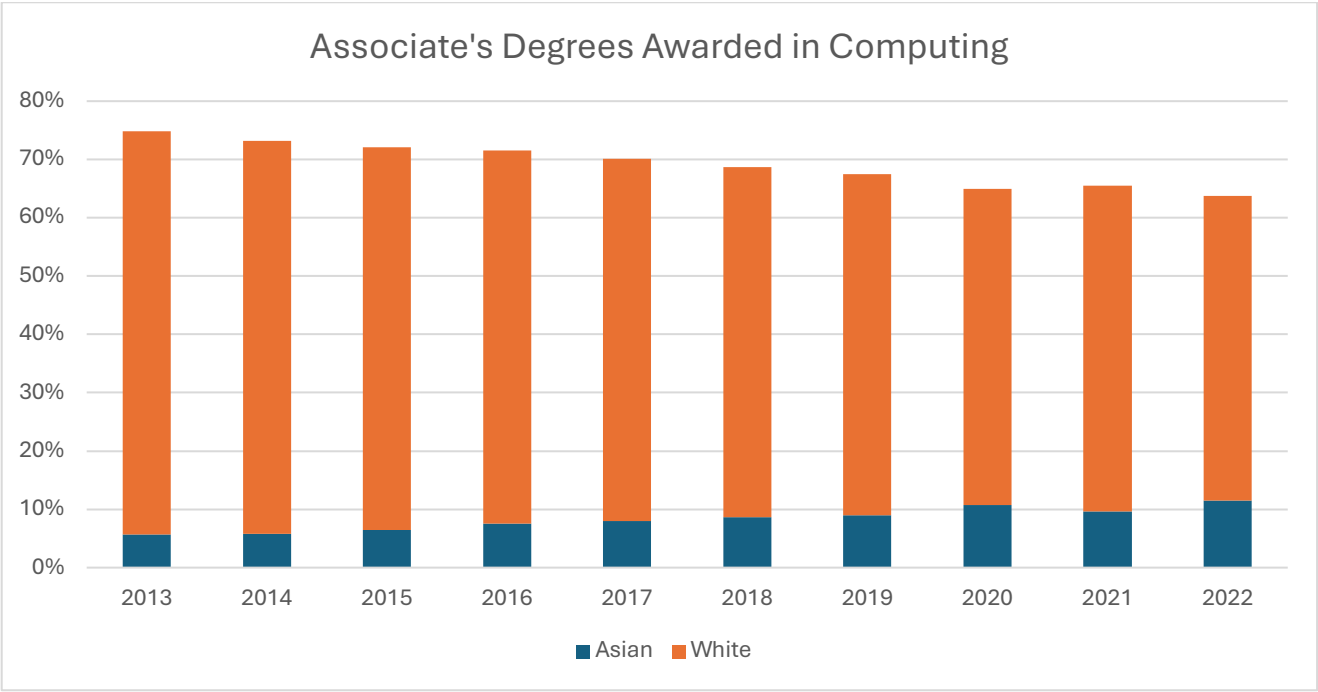


Figure 3 – Percentage of Associate's degrees in computing awarded to women (2013–2022)

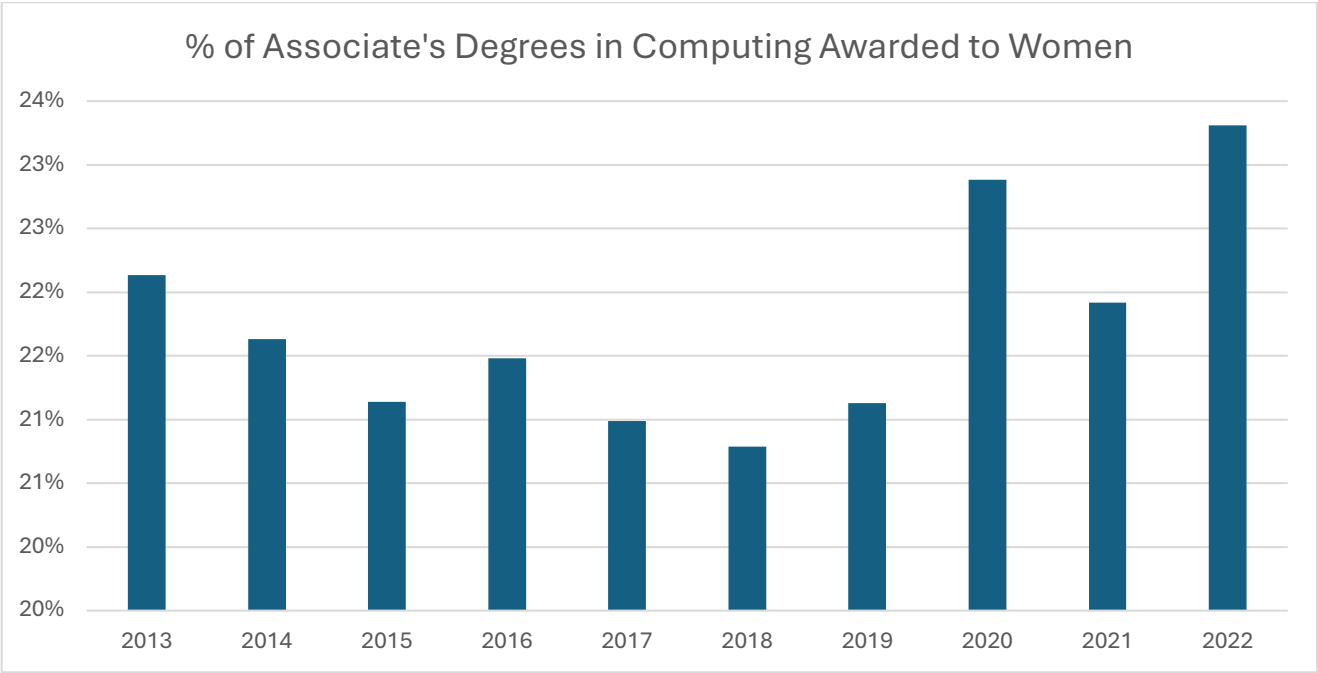


Figure 4 – Associate's degrees awarded in computing by race/ethnicity and gender (American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Two or more races men) (2013–2022)

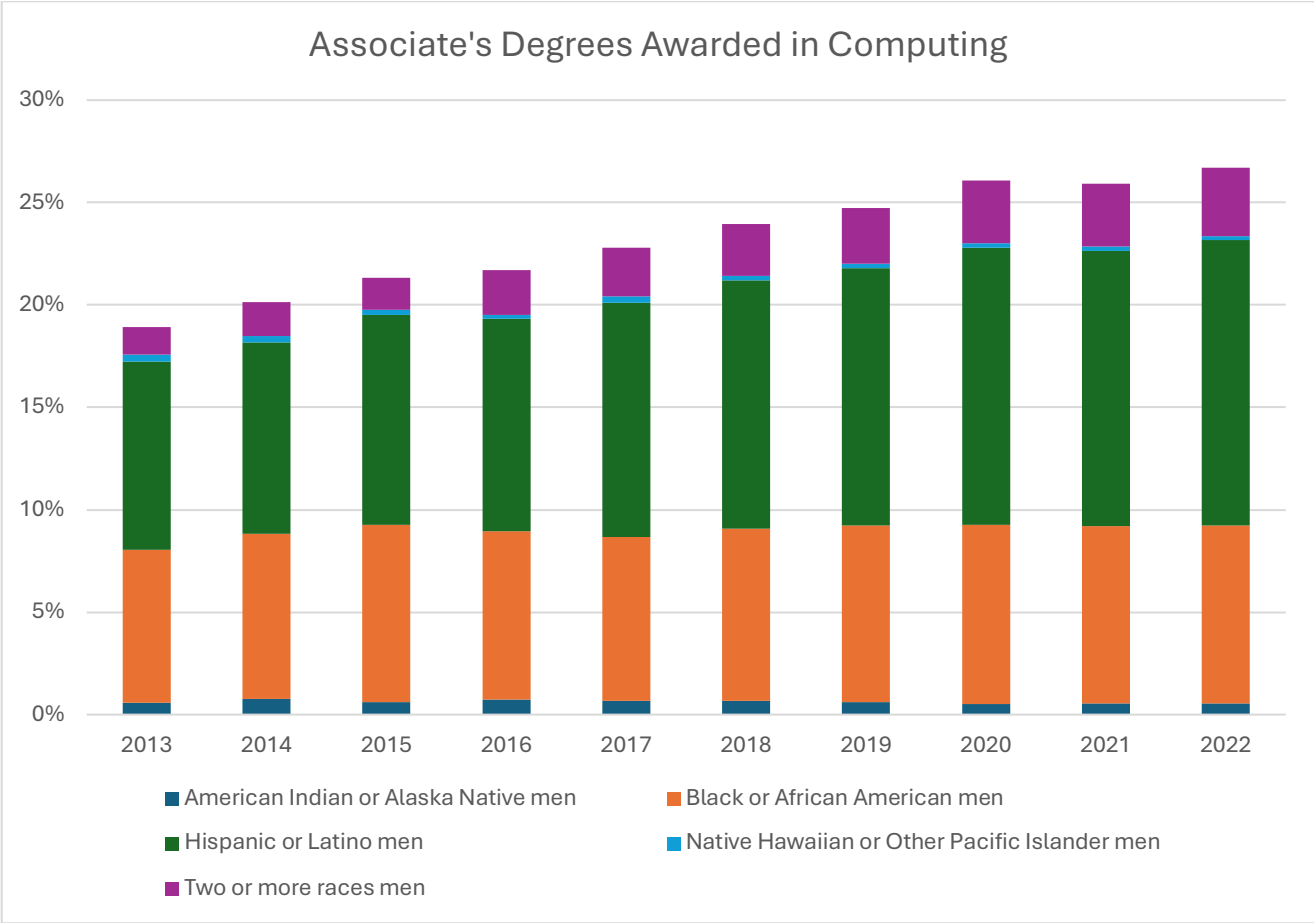


Figure 5 - Associate's degrees awarded in Computing by race/ethnicity and gender (American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Two or more races women) (2013–2022)

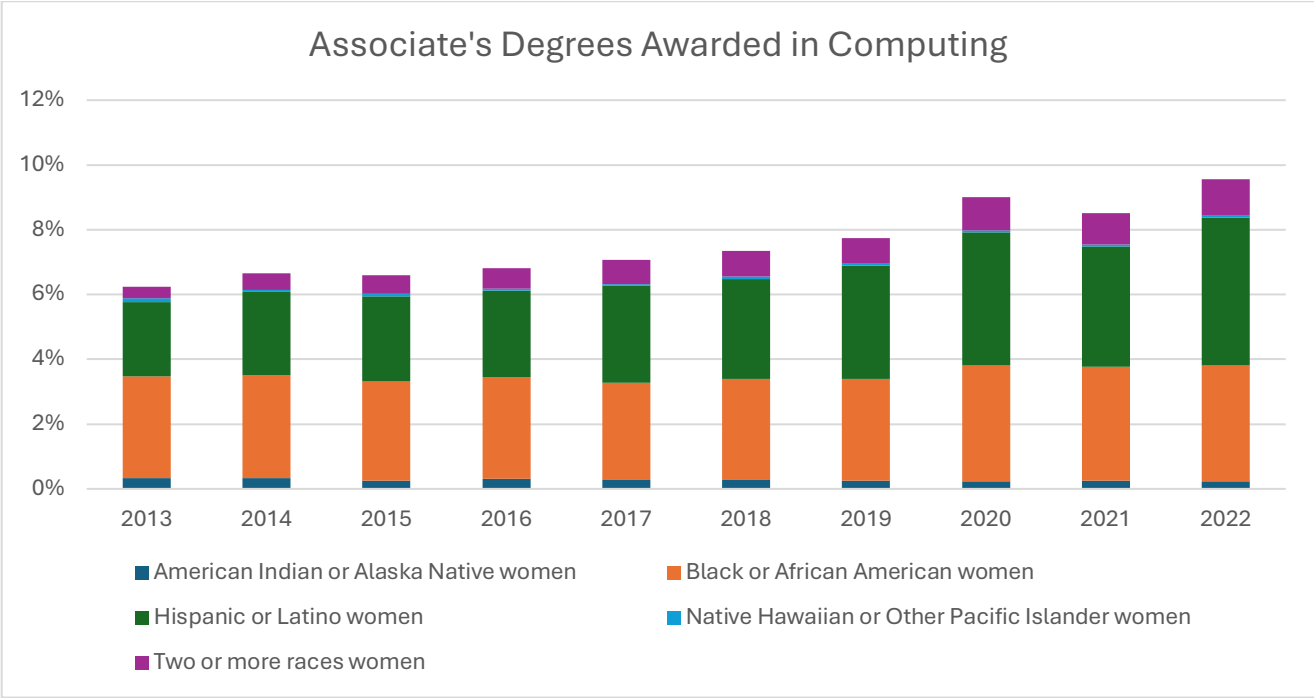


Figure 6 - Associate's degrees awarded in computing by race/ethnicity and gender (Asian, White men) (2013–2022)

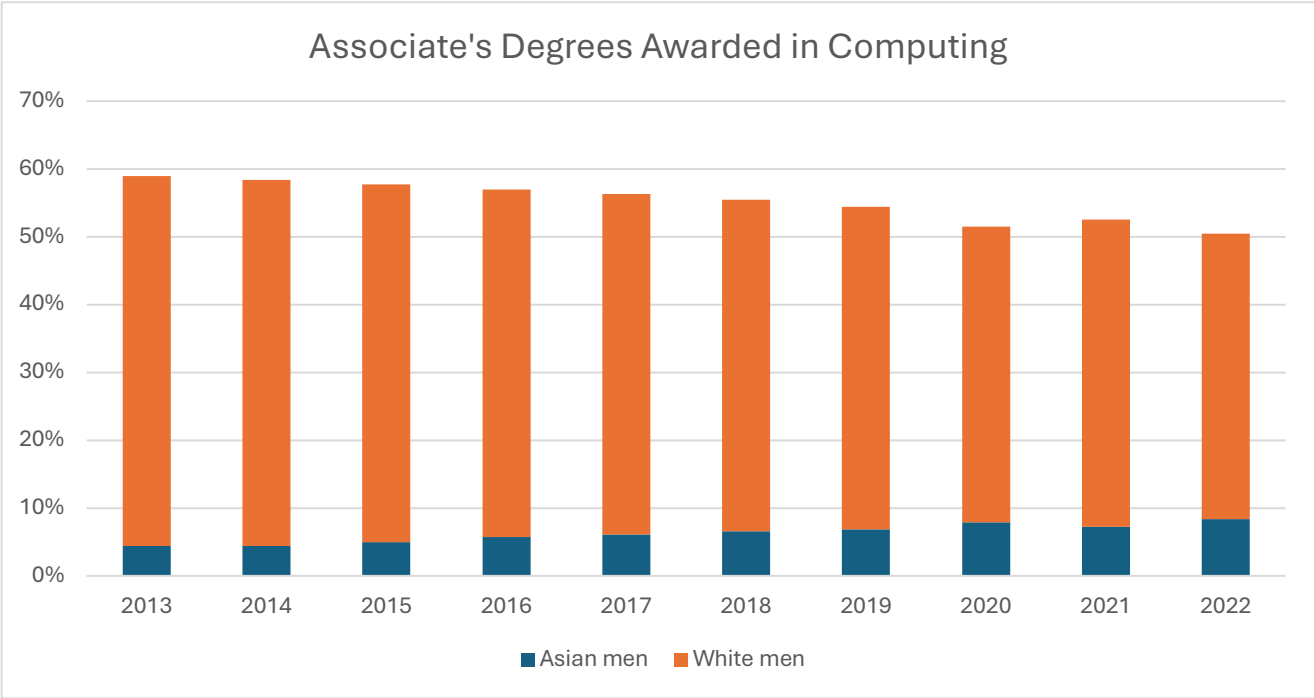
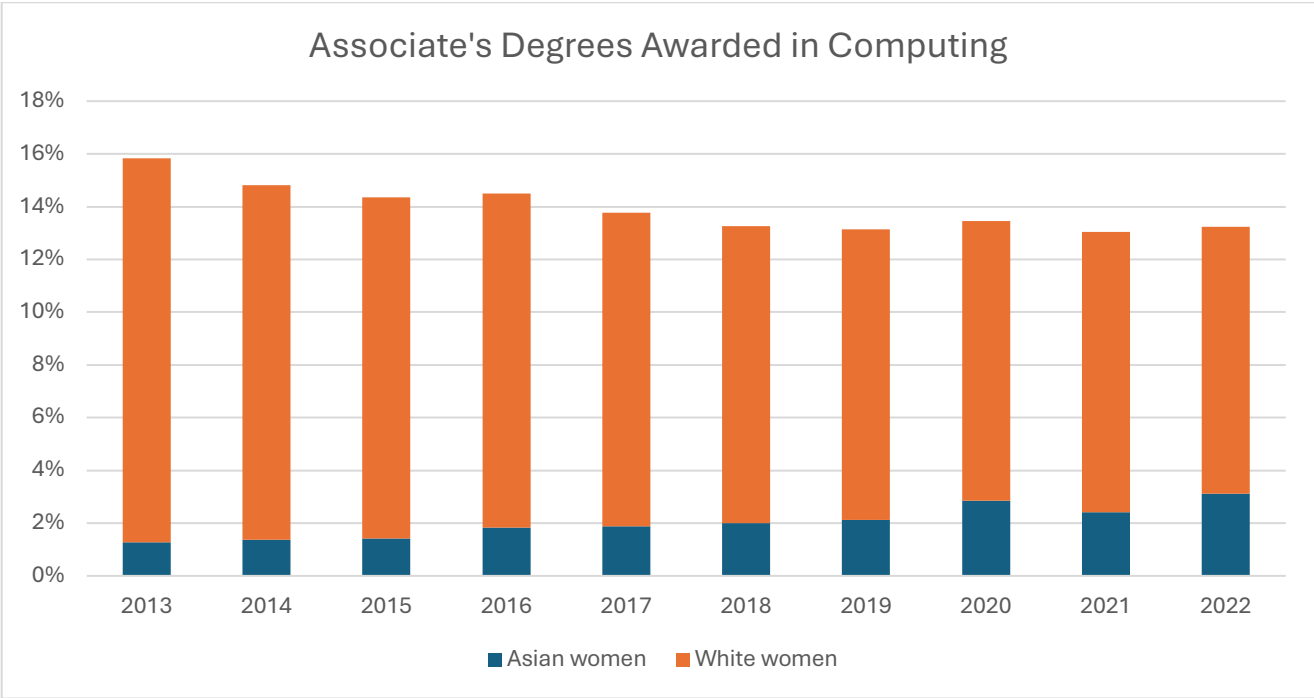


Figure 7 - Associate's degrees awarded in computing by race/ethnicity and gender (Asian, White women) (2013–2022)



Bachelor's Degrees

The analysis presented here shows that there was a minor increasing trend in computing degrees awarded to students who identify as American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, and two or more races in the past 10 years (23% in 2013 to 28% in 2022). Similar to Associate's degrees, this trend was primarily driven by increase in degrees awarded to Hispanic students.

Bachelor's degrees in computing awarded to women also increased slight going from 19% in 2013 to 26% in 2022.

Figure 8 – Bachelor’s degrees awarded in computing by race/ethnicity (American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Two or more races) (2013–2022)

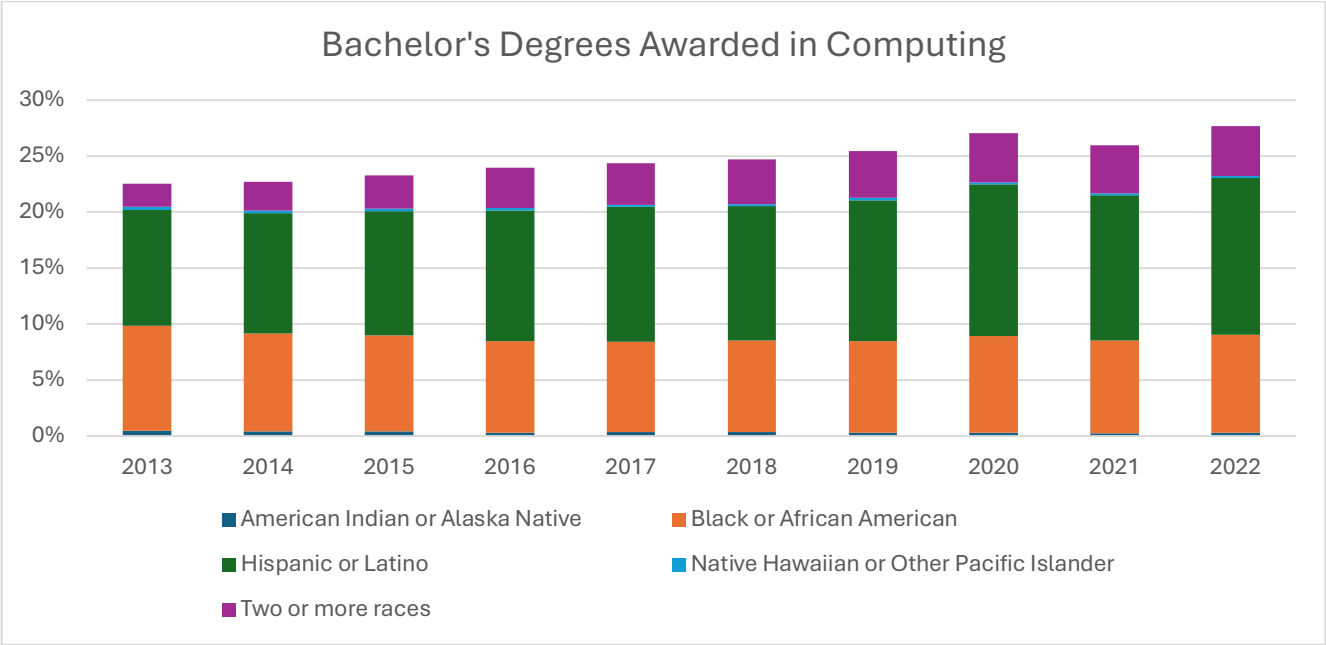


Figure 9 – Bachelor’s degrees awarded in computing by race/ethnicity (Asian, White) (2013–2022)

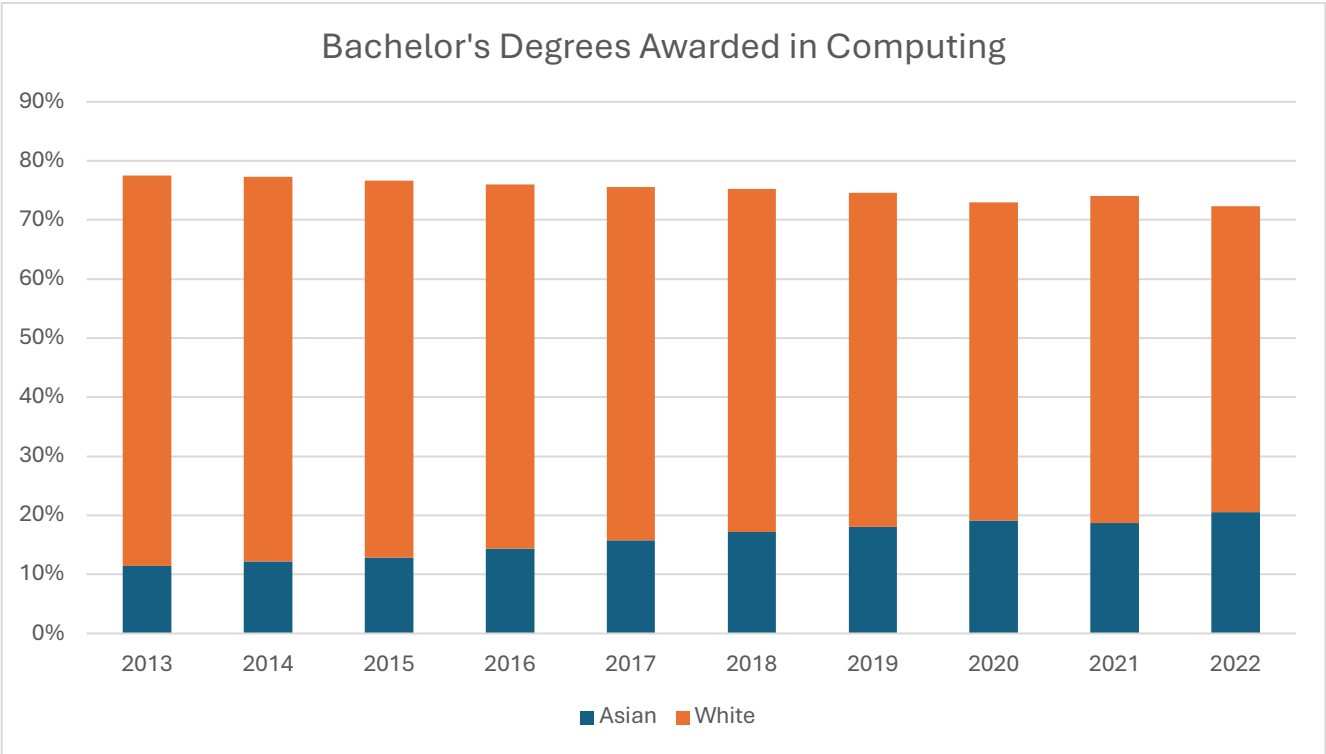


Figure 10 - Percentage of Bachelor's degrees in computing awarded to women (2013–2022)

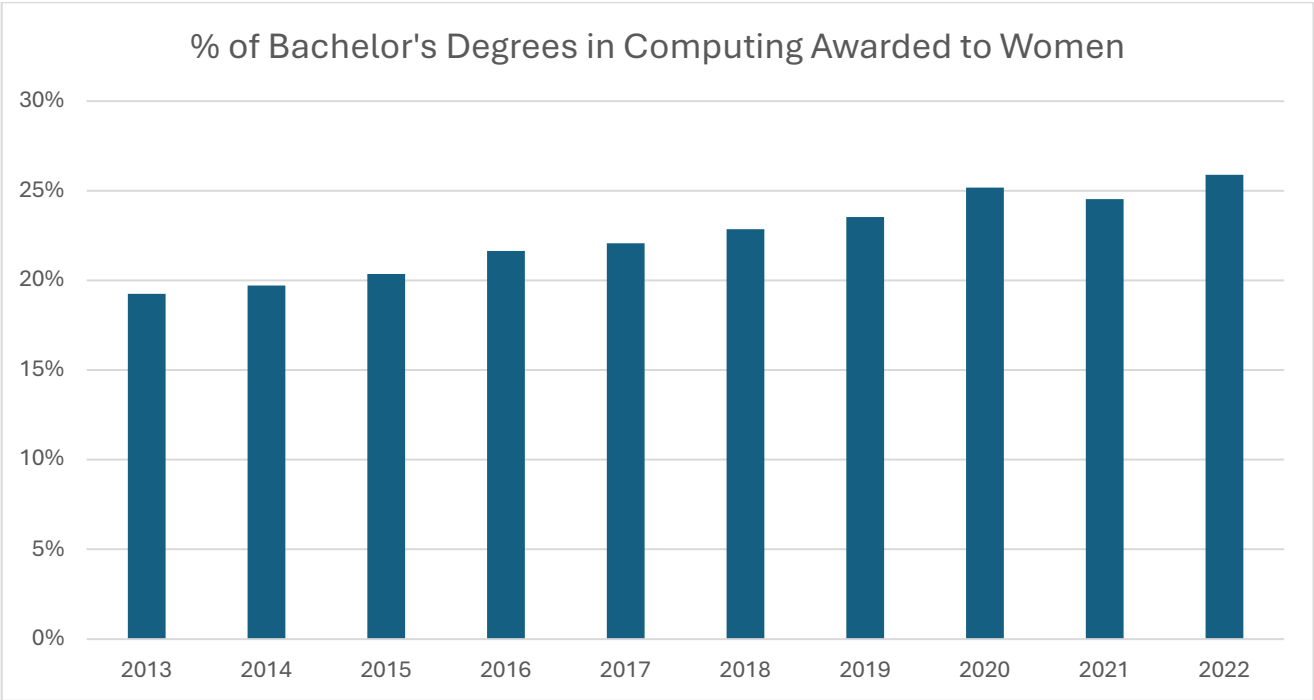


Figure 11 - Bachelor's degrees awarded in computing by race/ethnicity and gender (American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Two or more races men) (2013-2022)

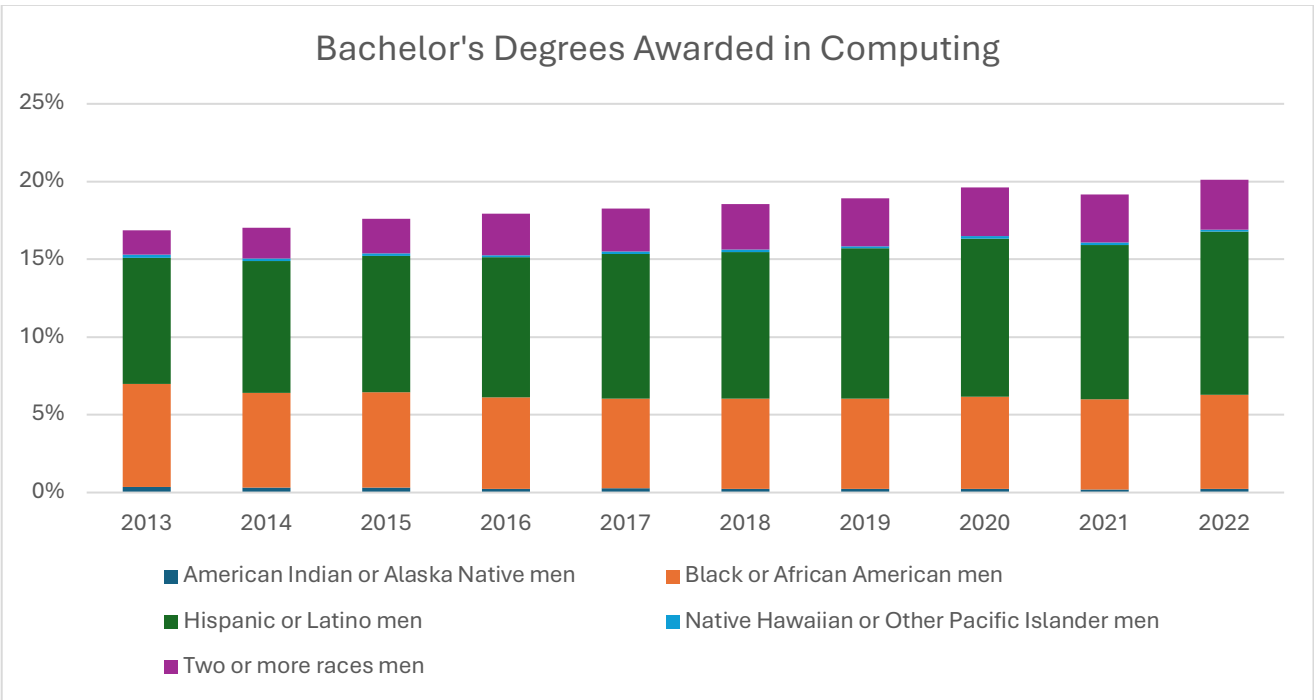


Figure 12 - Bachelor's degrees awarded in computing by race/ethnicity and gender (American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Two or more races women) (2013-2022)

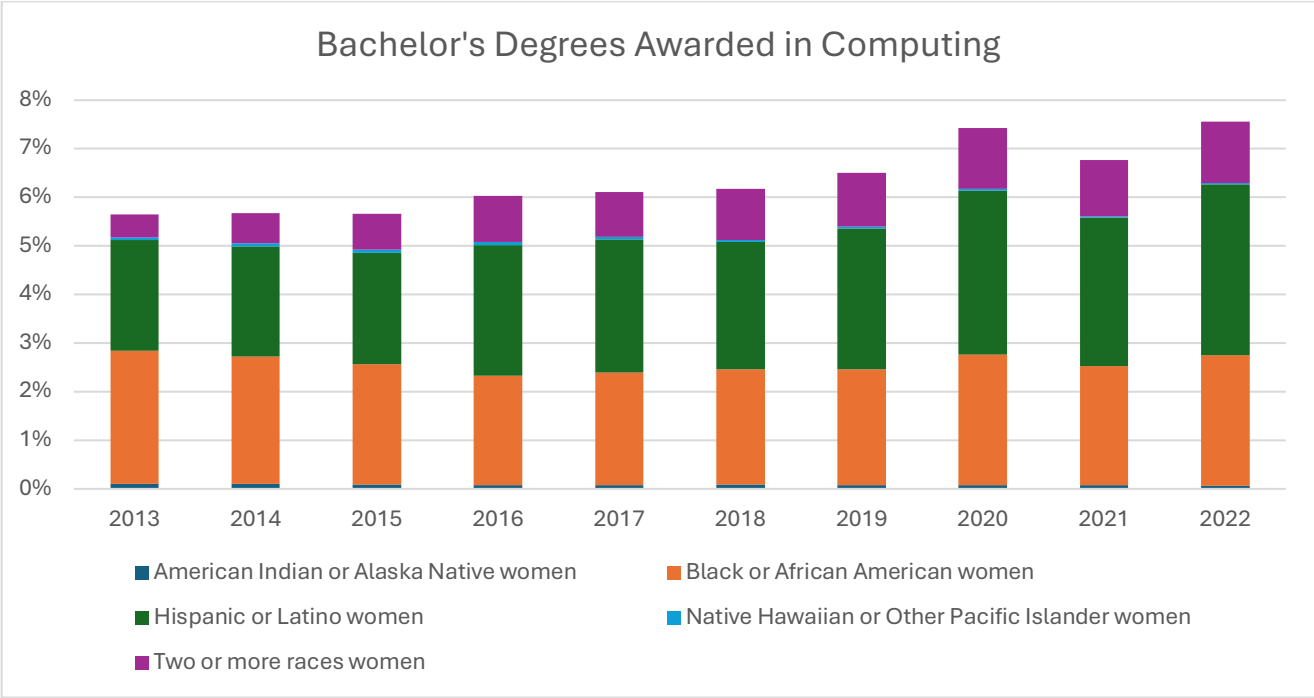


Figure 13 - Bachelor's degrees awarded in computing by race/ethnicity and gender (Asian, White men) (2013-2022)

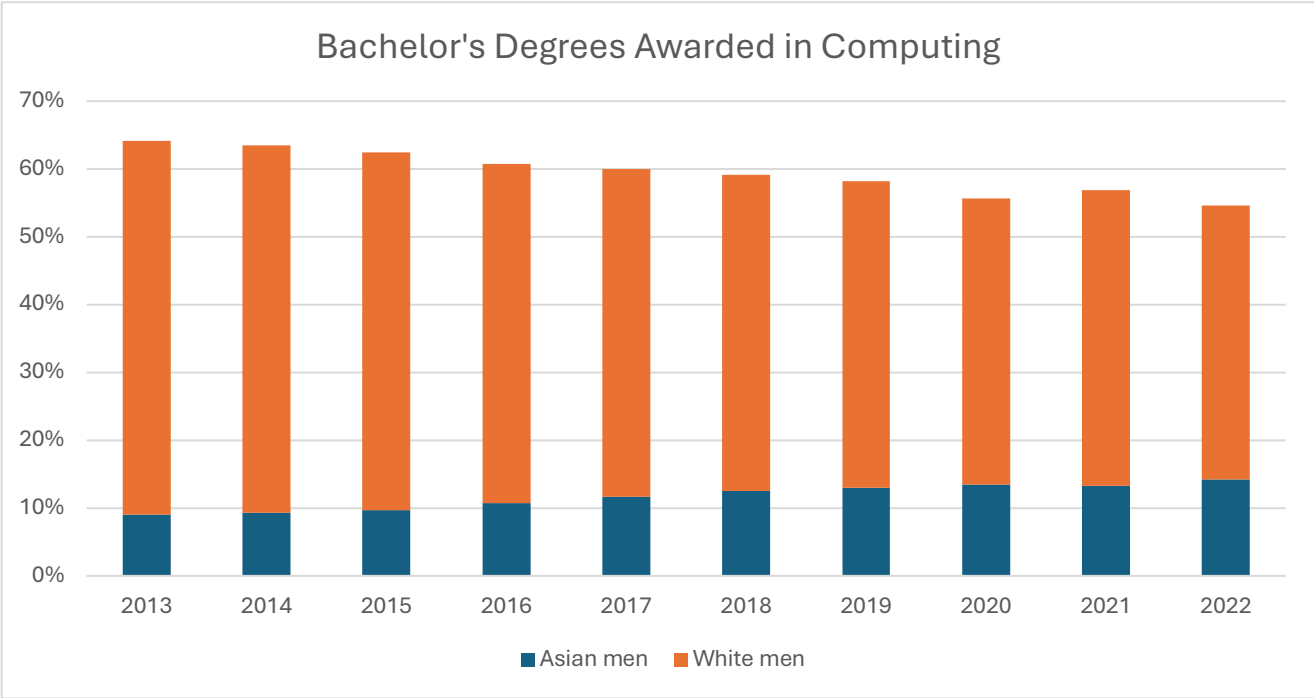
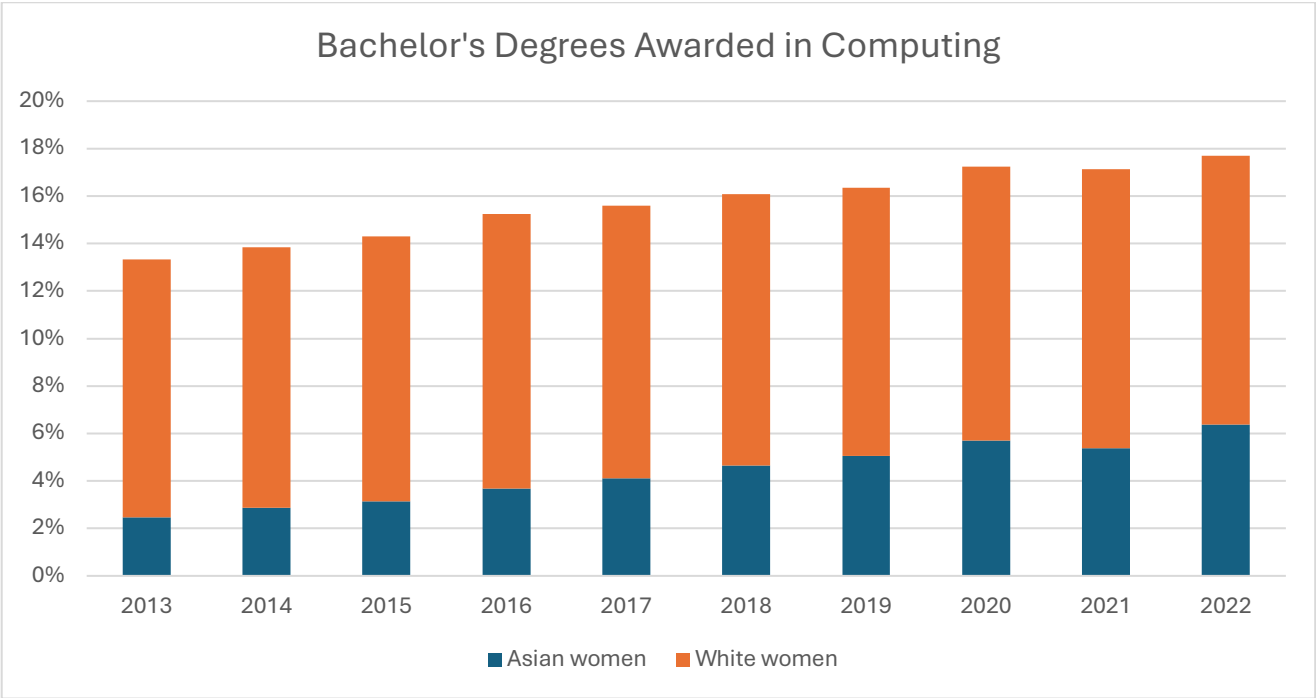


Figure 14 - Bachelor's degrees awarded in computing by race/ethnicity and gender (Asian, White women) (2013-2022)



Master's Degrees

Master's degrees awarded in computing does not show any major changes in terms of the racial/ethnic composition of the degree recipient within the past 10 years. While 24% of the computing Master's degrees were awarded to students who are American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, and two or more races in 2013, this number increased to only 27% in 2022.

The percentage of Master's degrees in computing awarded to women, however, increased somewhat more from 26% in 2013 to 35% in 2022.

Figure 15 – Master's degrees awarded in computing by race/ethnicity (American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Two or more races) (2013-2022)

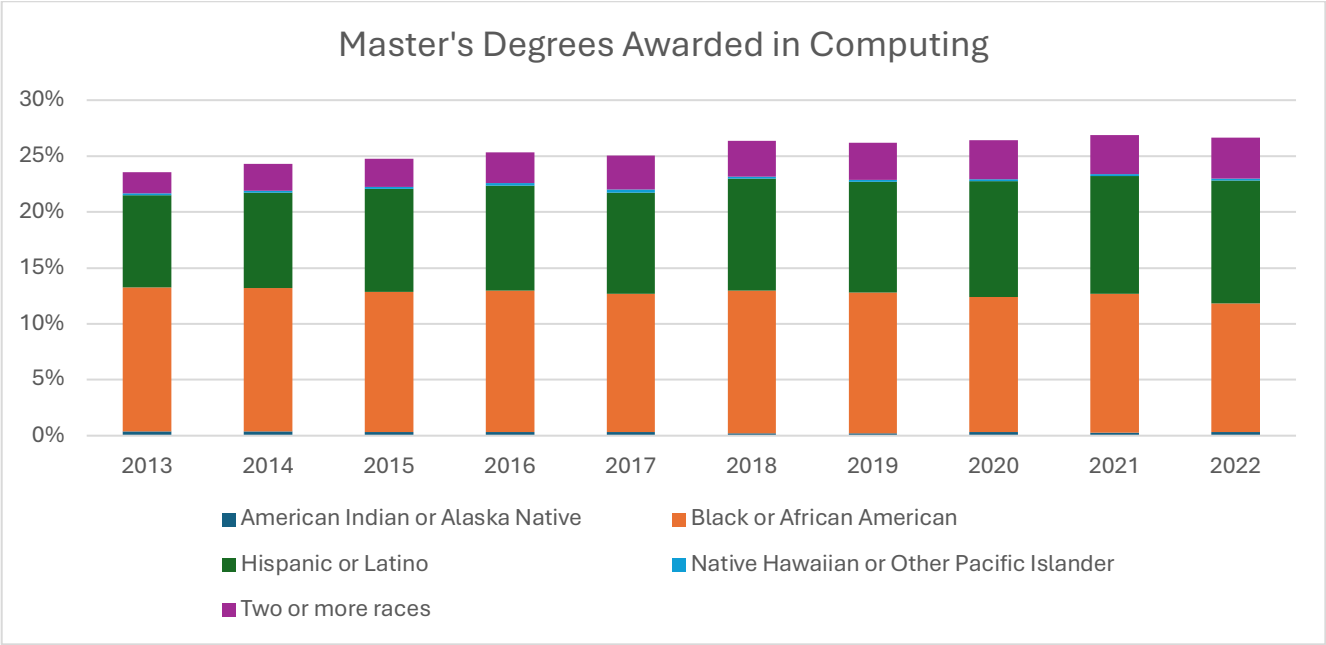


Figure 16 - Master's degrees awarded in computing by race/ethnicity (Asian, White) (2013-2022)

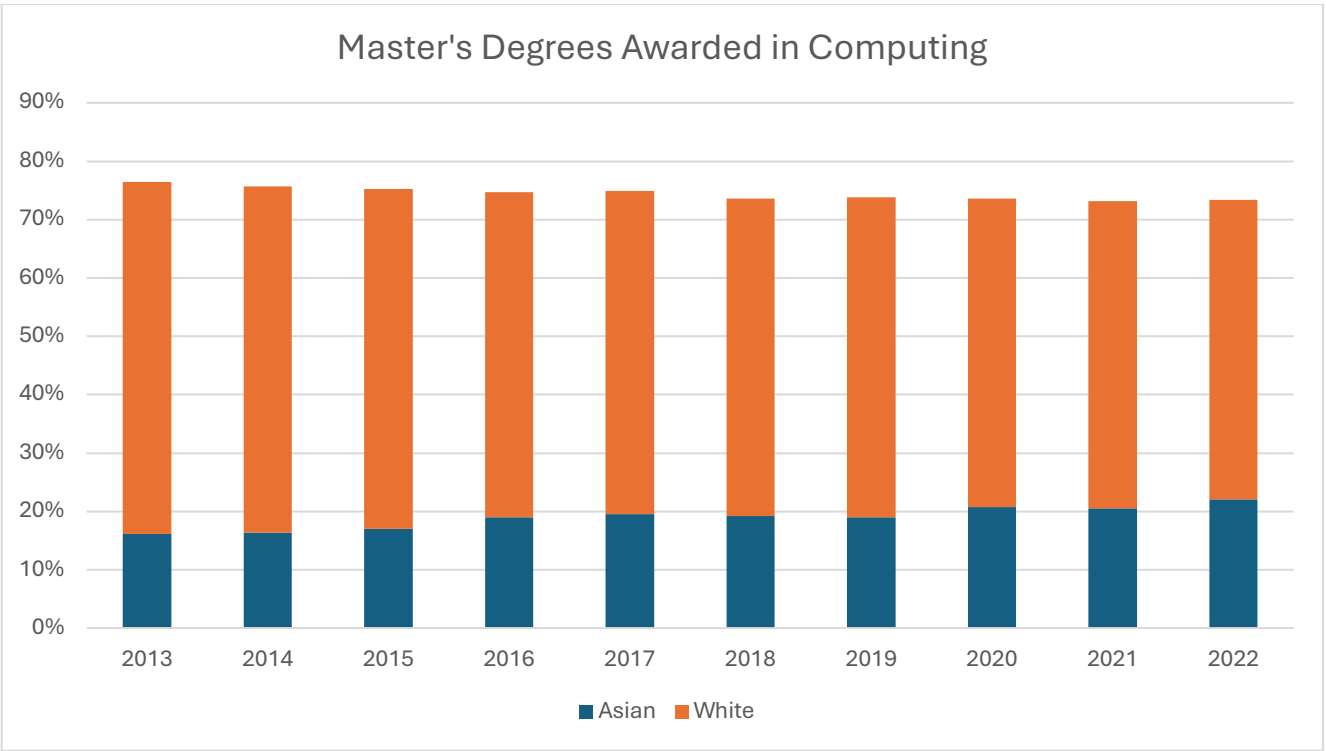


Figure 17 - Percentage of Master's degrees in computing awarded to women (2013–2022)

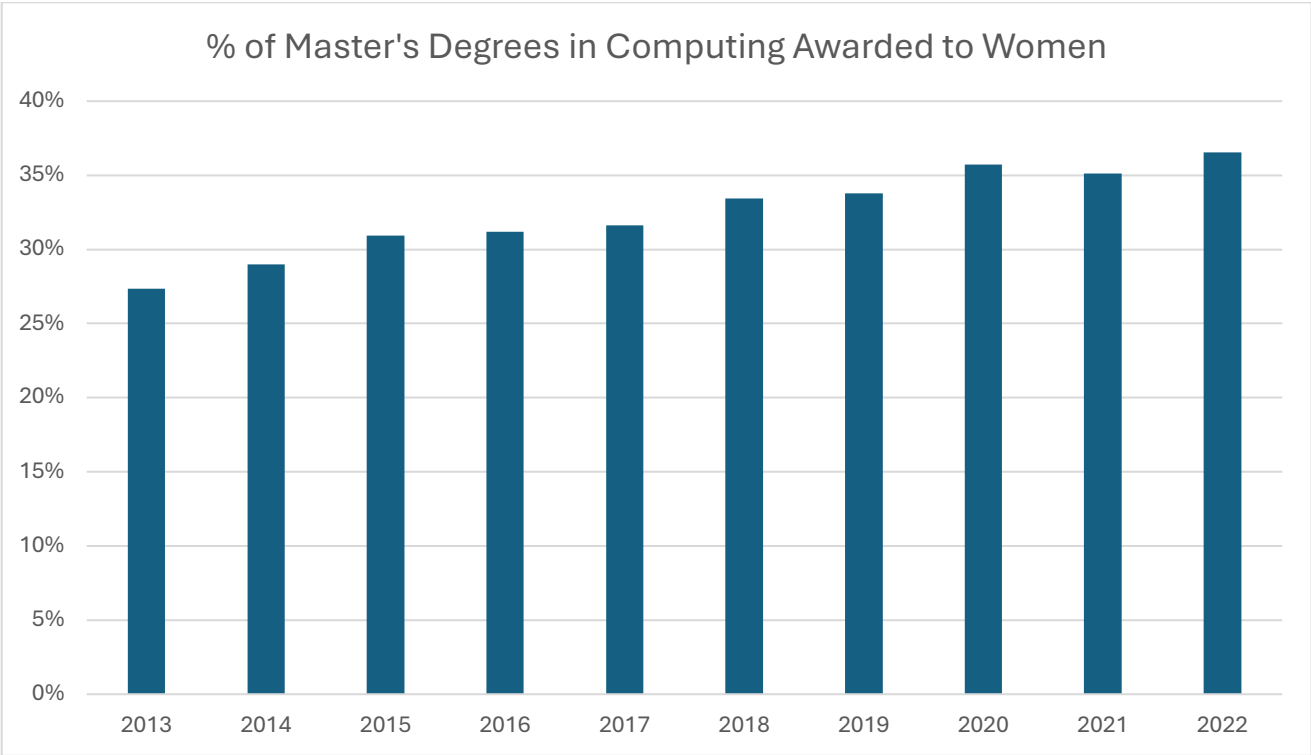


Figure 18 - Master's degrees awarded in computing by race/ethnicity and gender (American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Two or more races men) (2013-2022)

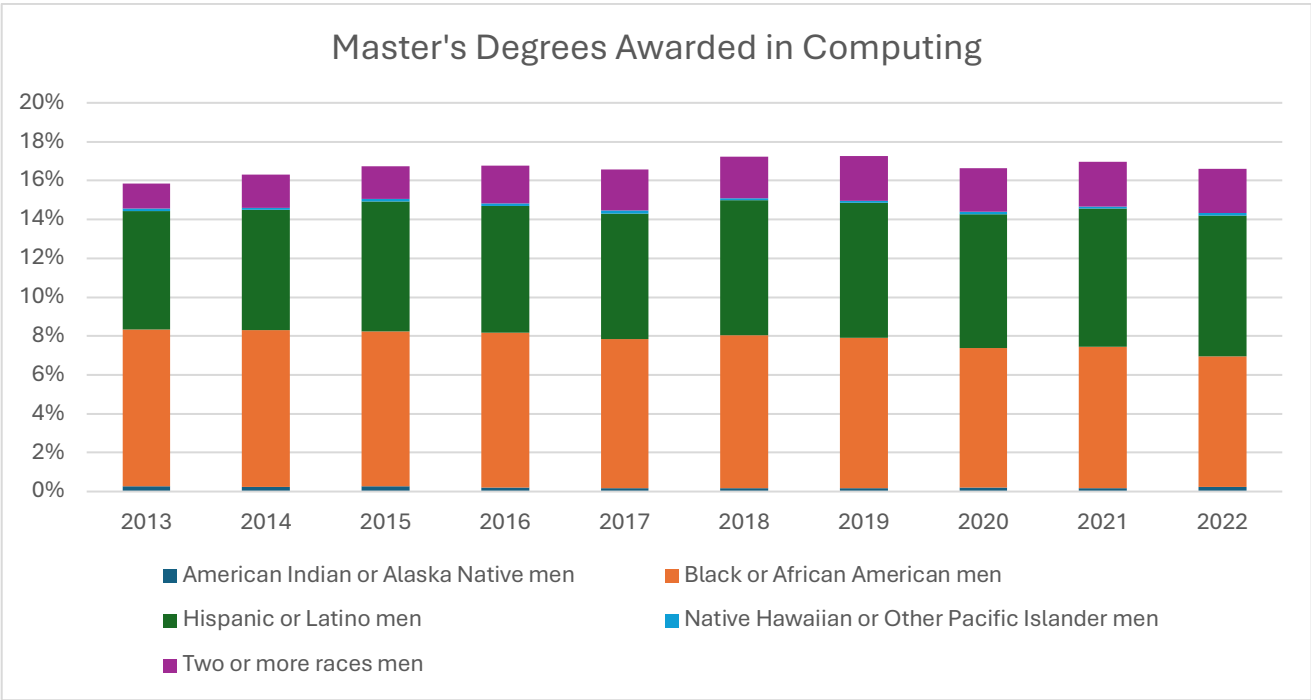


Figure 19 - Master's degrees awarded in computing by race/ethnicity and gender (American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Two or more races women) (2013-2022)

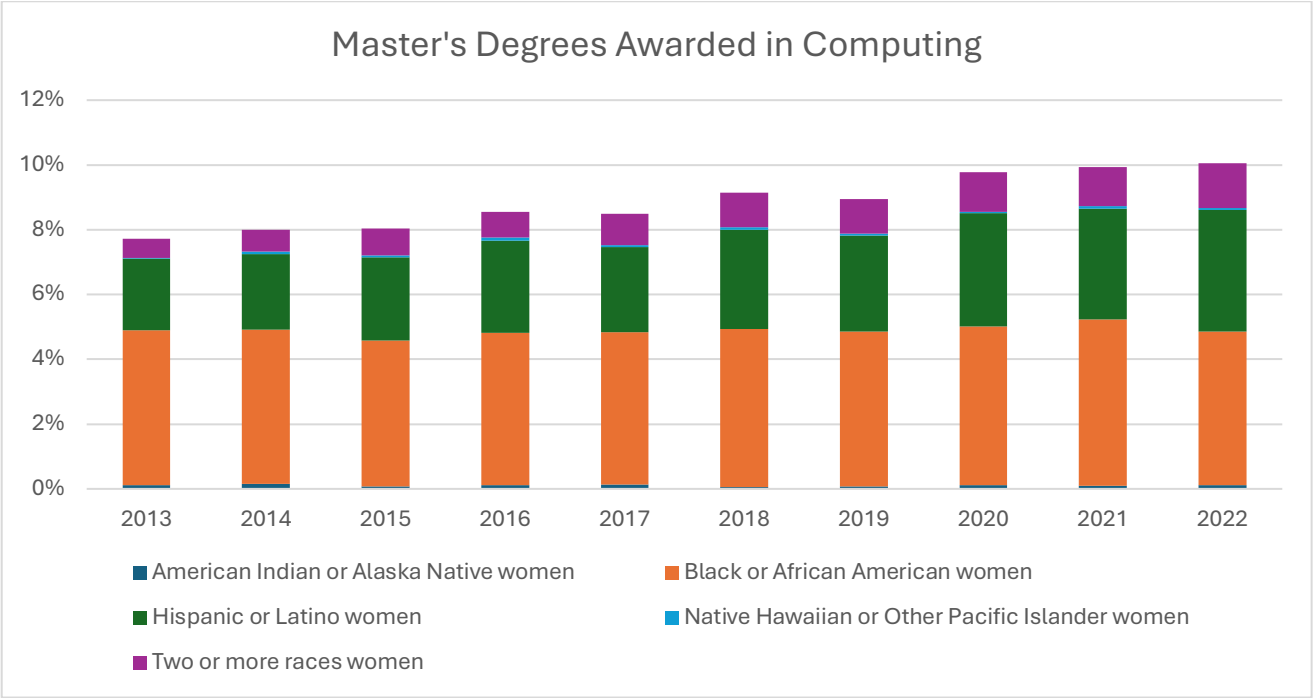


Figure 20 - Master's degrees awarded in computing by race/ethnicity and gender (Asian, White men) (2013-2022)

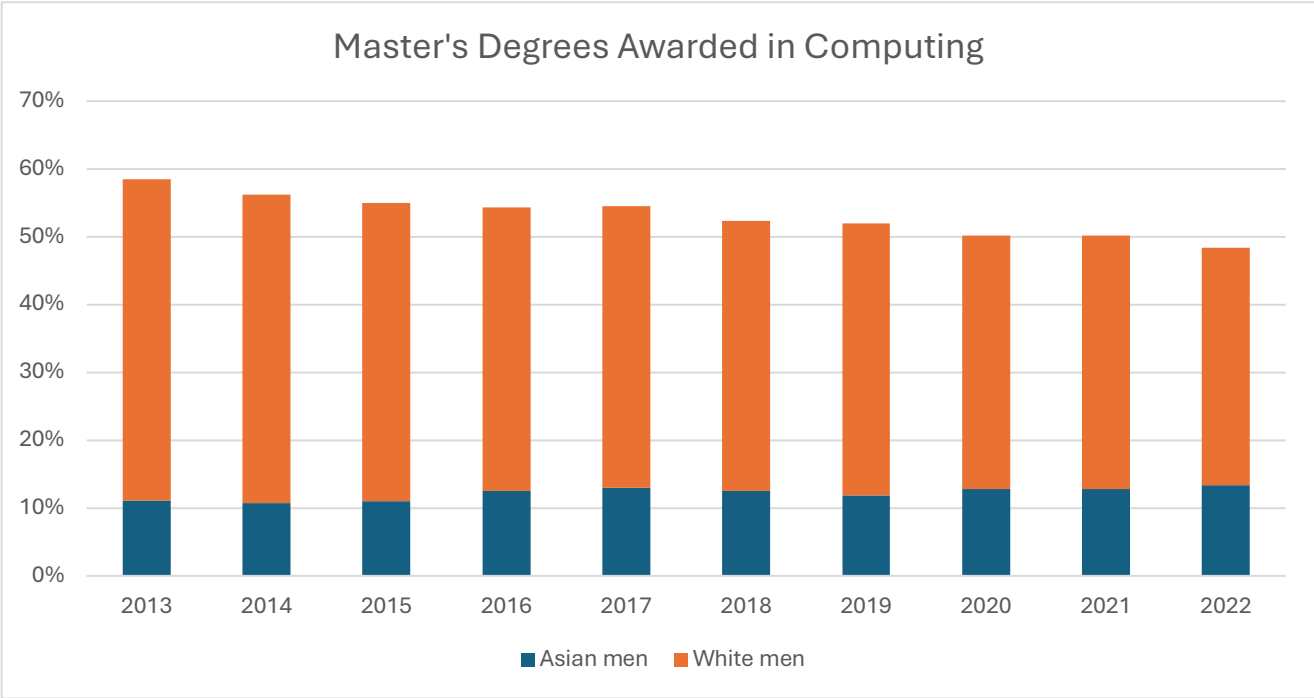
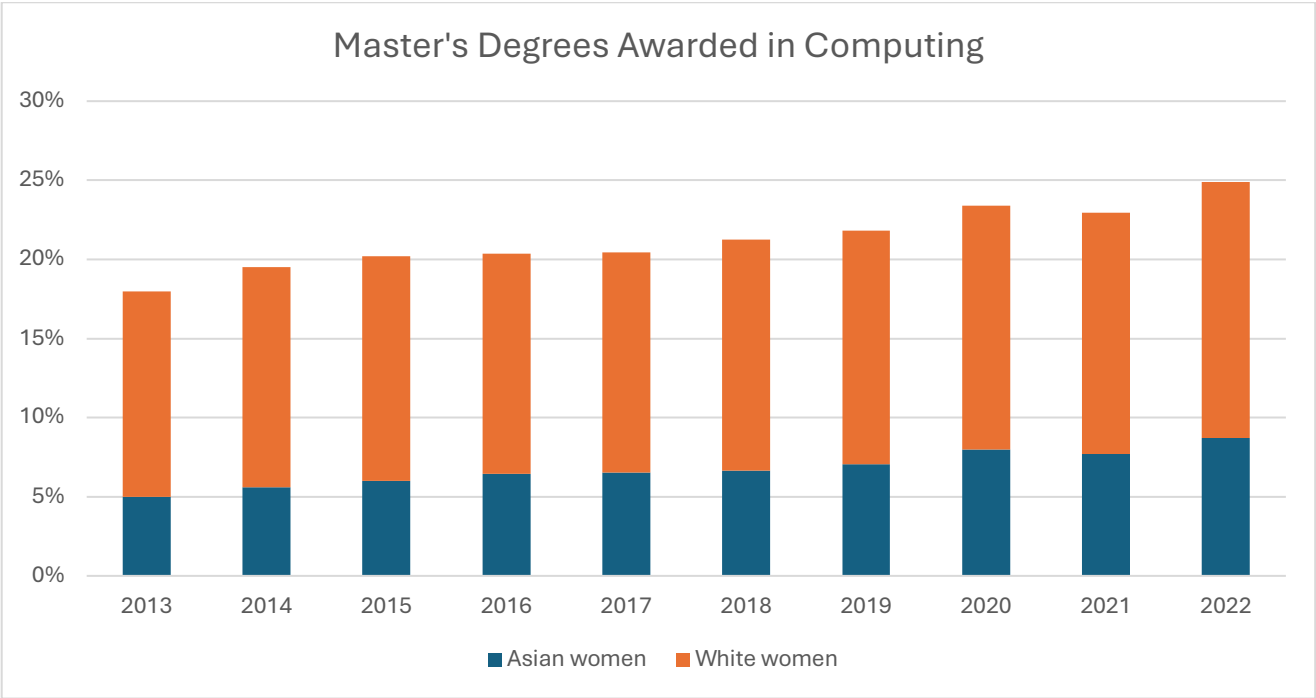


Figure 21 - Master's degrees awarded in computing by race/ethnicity and gender (Asian, White women) (2013-2022)



Doctoral Degrees

Doctoral degrees in computing awarded to students who are American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, and two or more races almost doubled in percentage points within the past ten years, increasing from 11% in 2013 to 20% in 2022. The increase was similar in percentages for men and women of these racial/ethnic identities. That said, the overall percentage of Doctoral degrees awarded to students who are in these racial/ethnic groups remains the lowest among all degree levels considered in this report.

Computing doctoral degrees awarded to women increased from 20% to 28% in the period between 2013 and 2022.

Figure 22 – Doctoral degrees awarded in computing by race/ethnicity (American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Two or more races) (2013-2022)

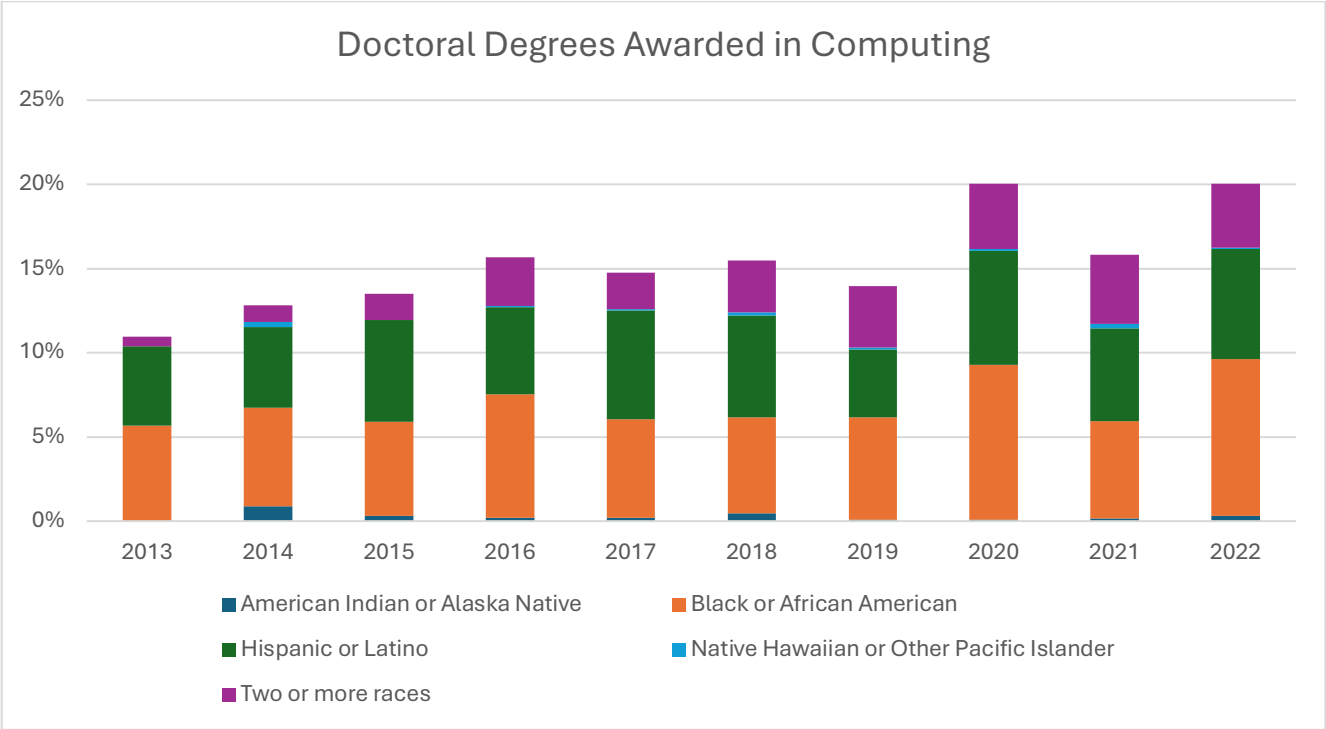


Figure 23 - Doctoral degrees awarded in computing by race/ethnicity (Asian, White) (2013-2022)

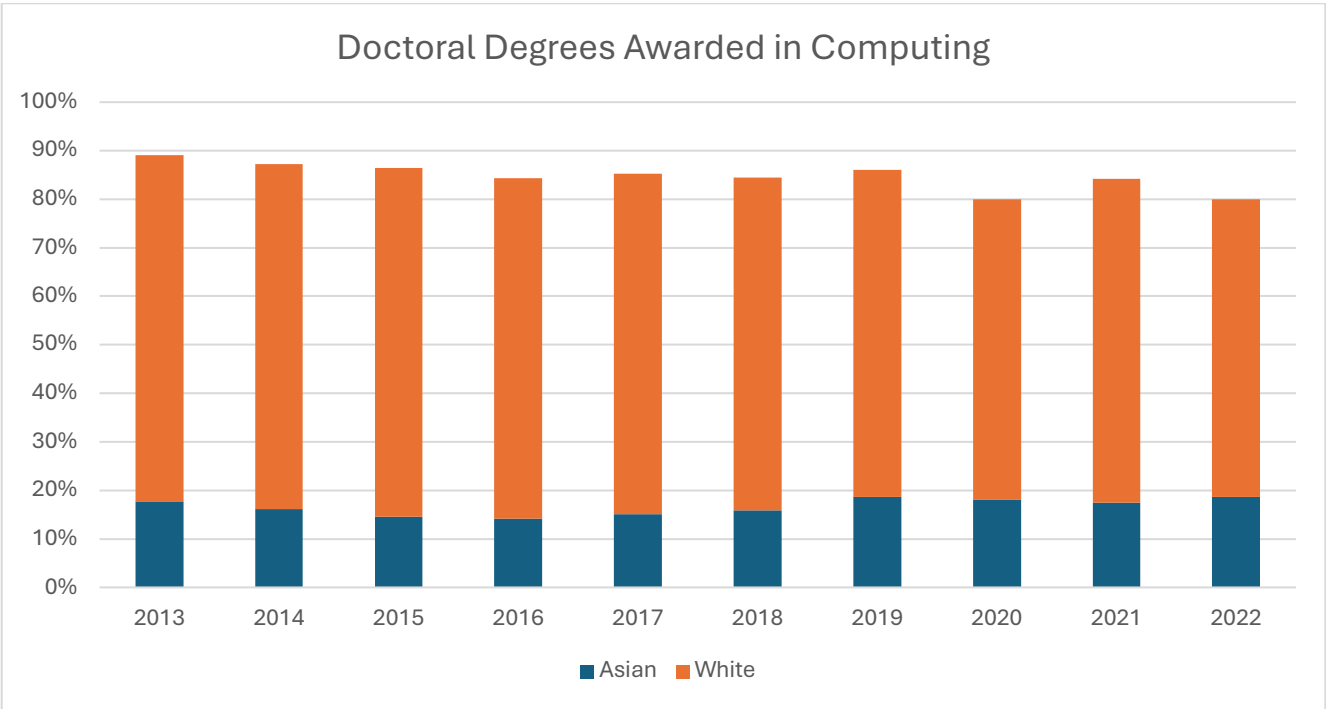


Figure 24 - Percentage of Doctoral degrees in computing awarded to women (2013–2022)

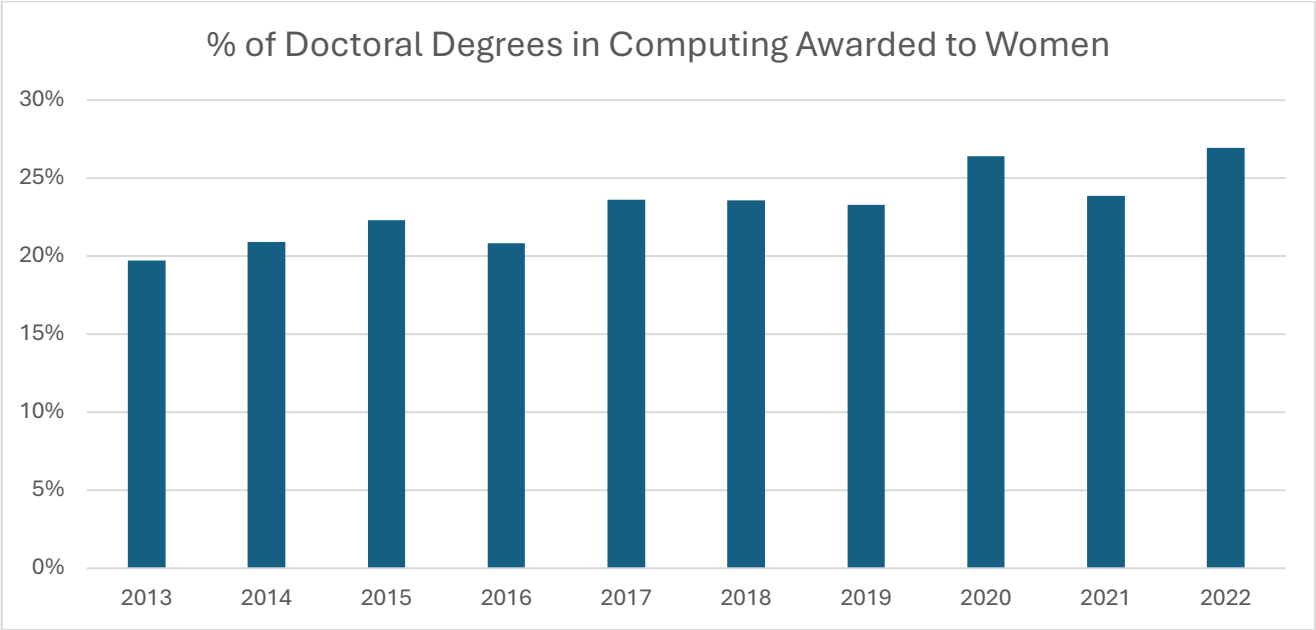


Figure 25 - Doctoral degrees awarded in computing by race/ethnicity and gender (American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Two or more races men) (2013-2022)

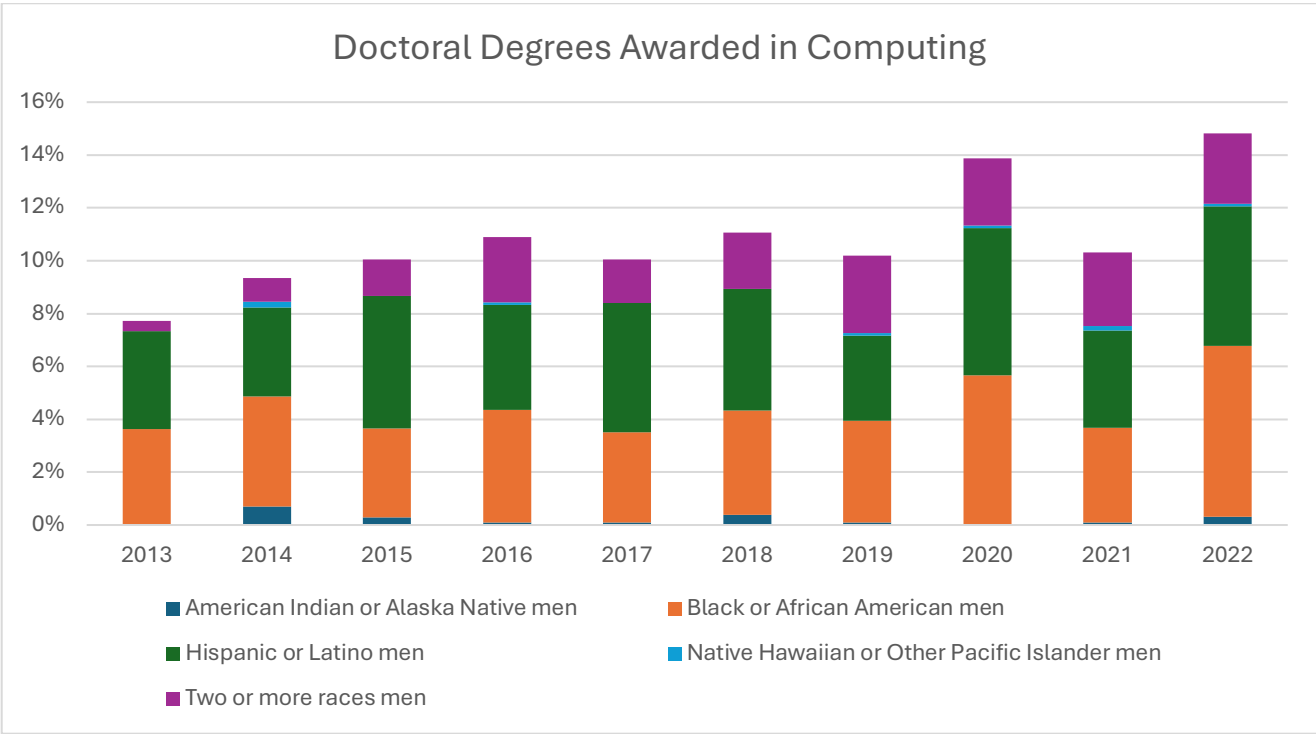


Figure 26 - Doctoral degrees awarded in computing by race/ethnicity and gender (American Indian or Alaska Native, Black or African American, Hispanic or Latino, Native Hawaiian or Other Pacific Islander, Two or more races women) (2013-2022)

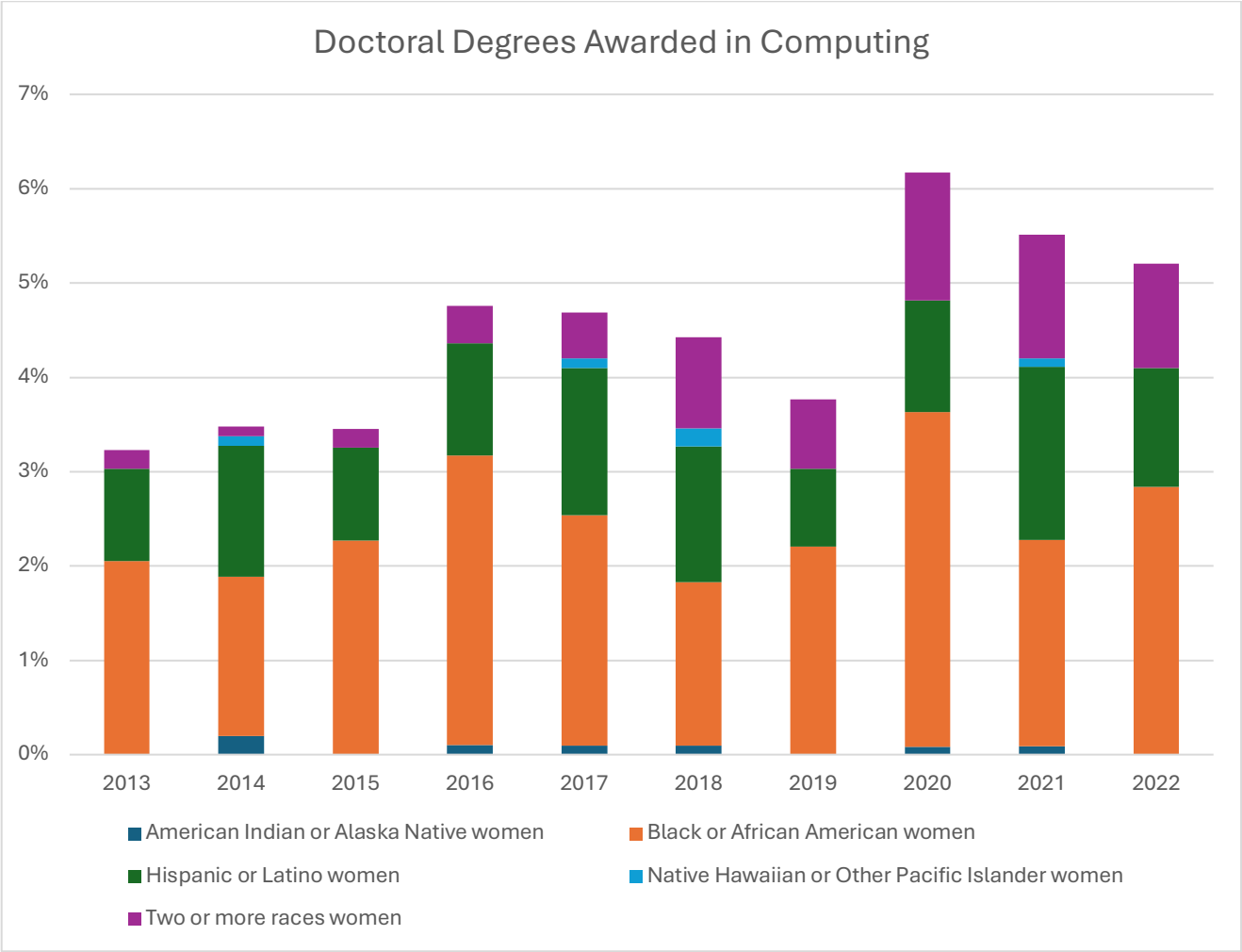


Figure 27 - Doctoral degrees awarded in computing by race/ethnicity and gender (Asian, White men) (2013-2022)

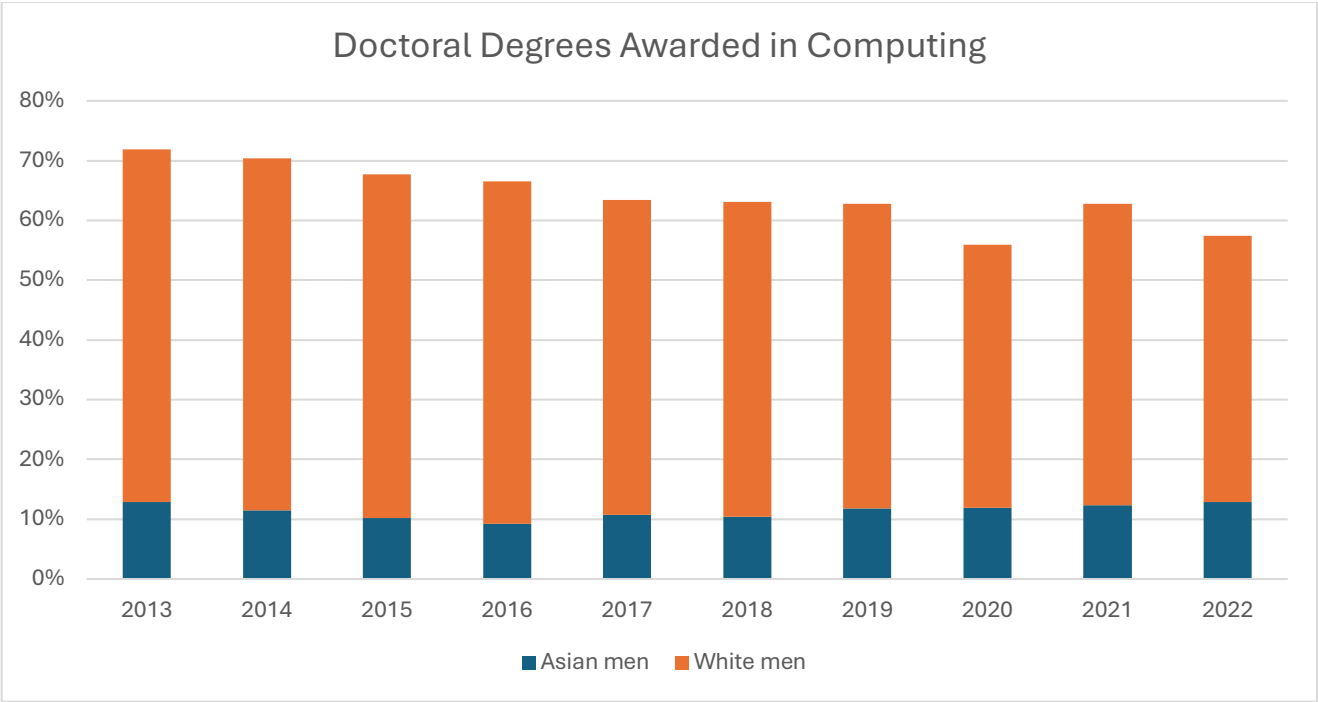
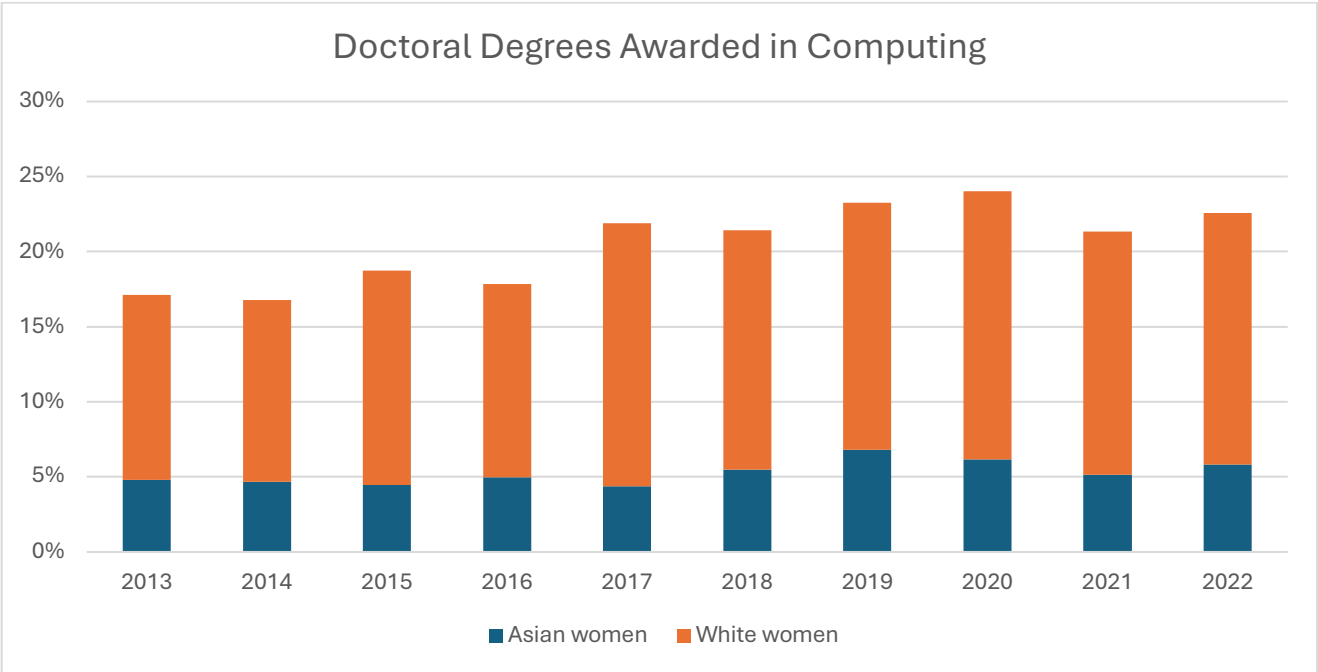


Figure 28 - Doctoral degrees awarded in computing by race/ethnicity and gender (Asian, White women) (2013-2022)



Early Career Faculty

This section focuses on early career faculty demographics based on the CRA Taulbee Survey annual reports. Data used in this section can be found on Table F8 of the annual CRA Taulbee Survey reports. While the Taulbee Survey includes data on other faculty ranks and non-tenure track faculty, this report focuses on the tenure track Assistant Professors as a starting point.

The analysis presented here shows that there have not been any observable trends in the demographic breakdown of tenure track Assistant Professors' demographic composition in terms of the racial/ethnic and gender identities. That said, it is important to note that data presented here are limited to doctoral degree granting institutions.

Figure 29 – Tenure track Assistant Professors by race/ethnicity (American Indian or Alaska Native, Black or African-American, Native Hawaiian/ Pacific Islander, Multiracial, not Hispanic, Hispanic, any race) (2013-2023)

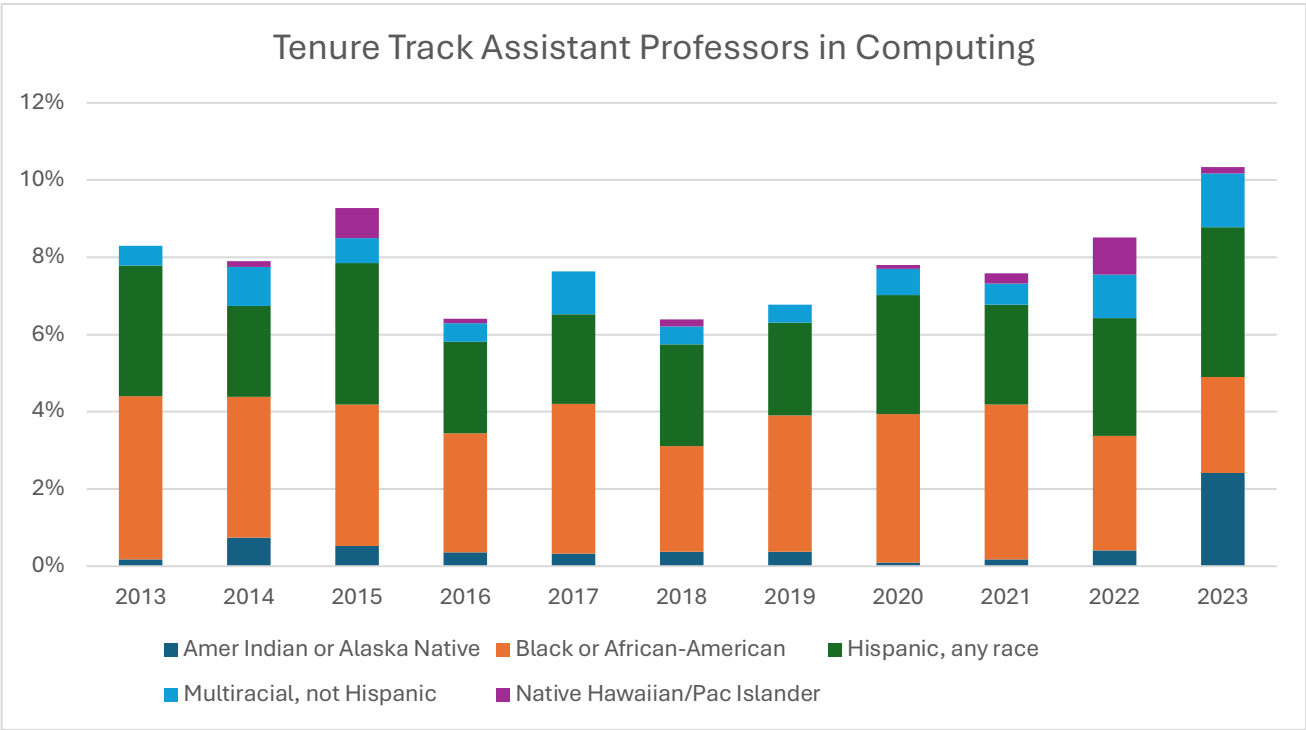


Figure 30 – Tenure track Assistant Professors by race/ethnicity (Asian, White) (2013-2023)

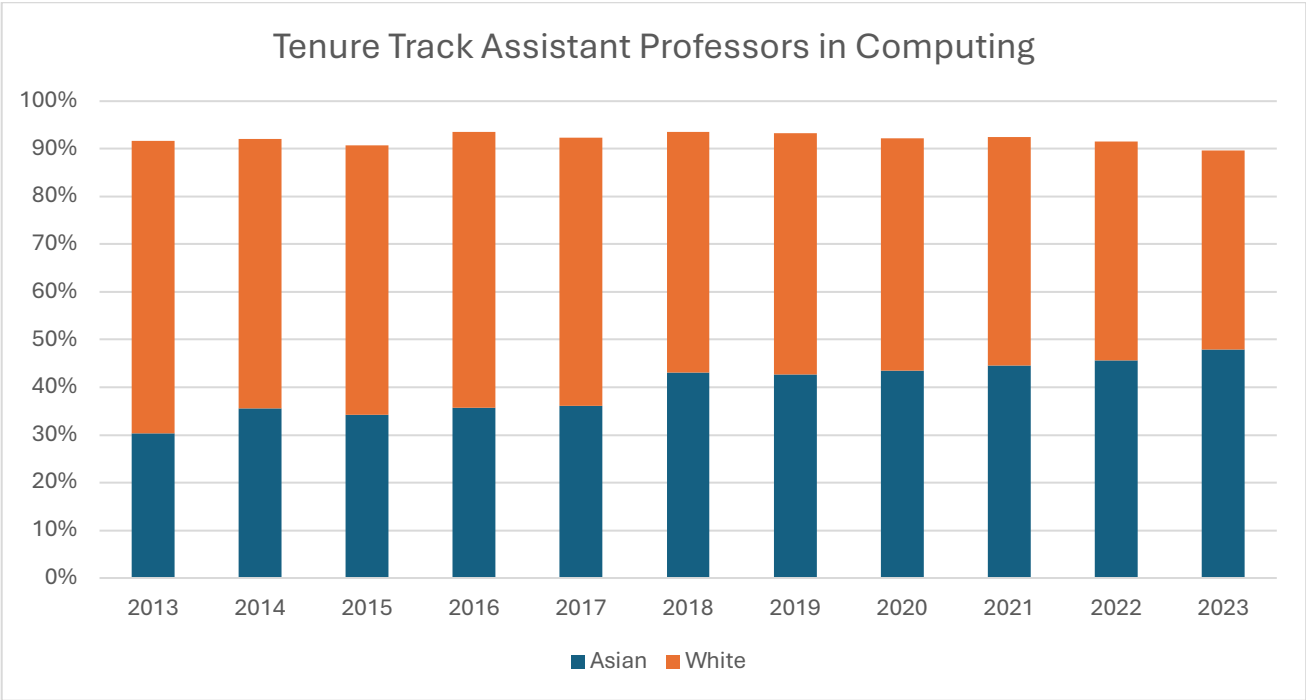


Figure 31 – Tenure track Assistant Professors who are female (2013-2023)

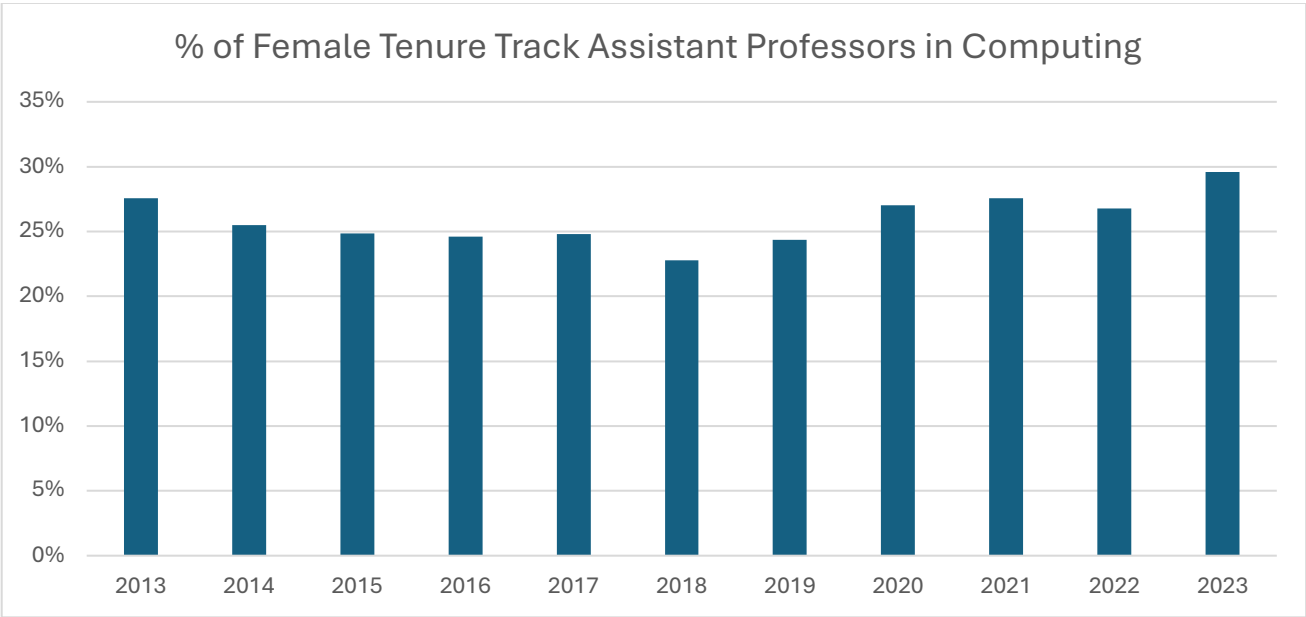


Figure 32 – Tenure track Assistant Professors by race/ethnicity and gender (American Indian or Alaska Native, Black or African-American, Native Hawaiian/ Pacific Islander, Multiracial, not Hispanic, Hispanic, any race female) (2013-2023)

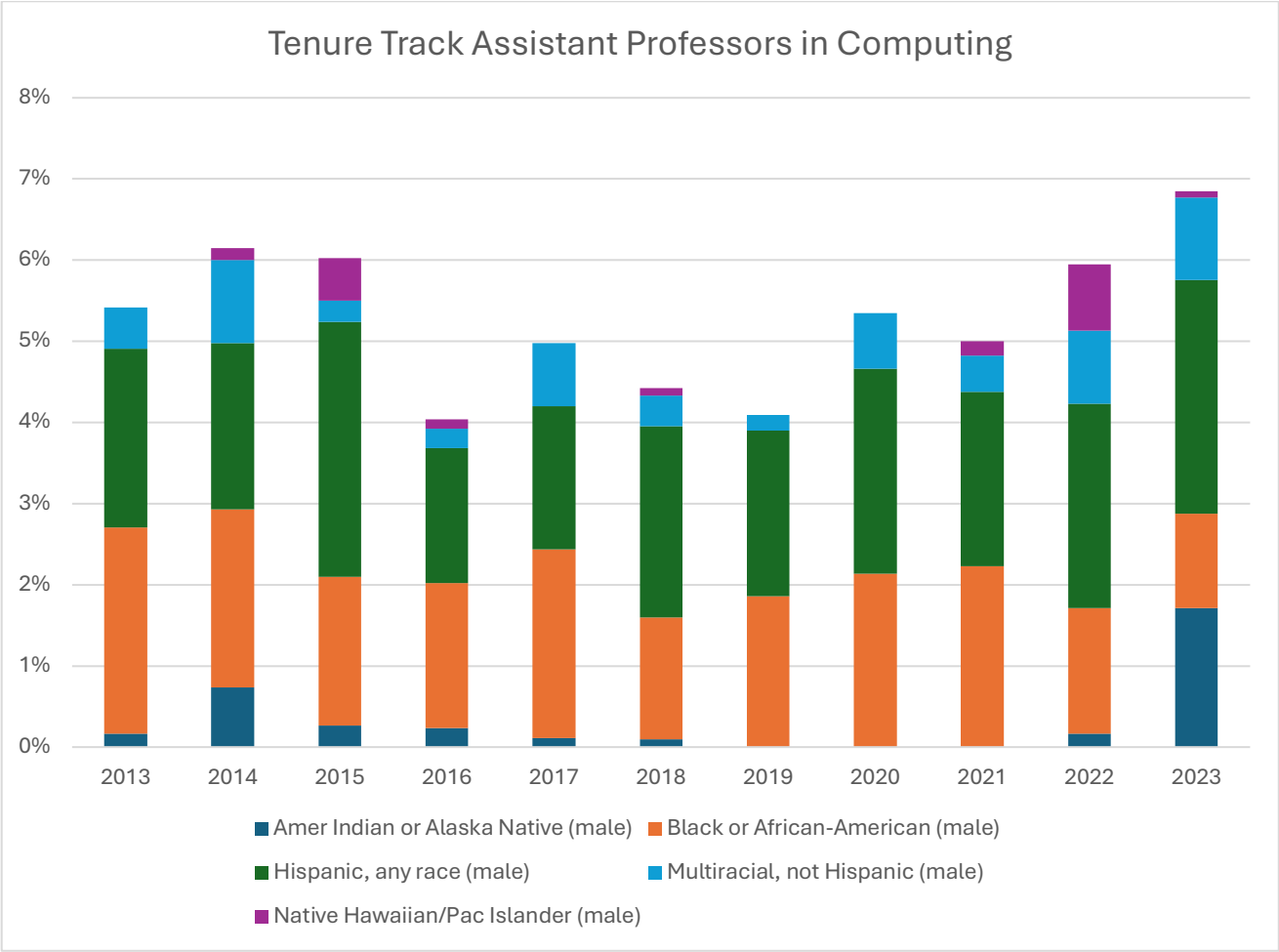


Figure 33 – Tenure track Assistant Professors by race/ethnicity and gender (American Indian or Alaska Native, Black or African-American, Native Hawaiian/ Pacific Islander, Multiracial, not Hispanic, Hispanic, any race female) (2013-2023)

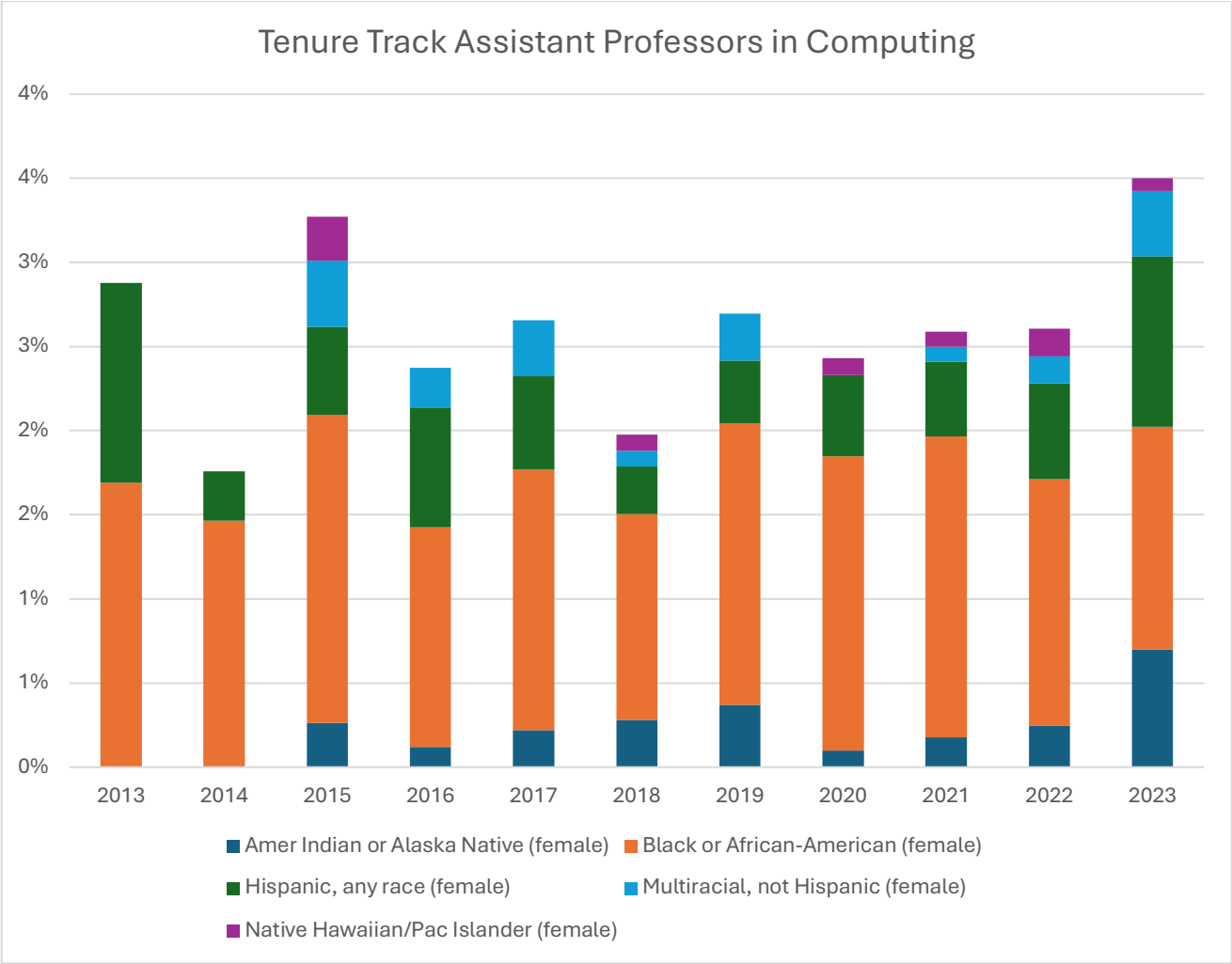


Figure 34 – Tenure track Assistant Professors by race/ethnicity and gender (Asian, White male) (2013-2022)

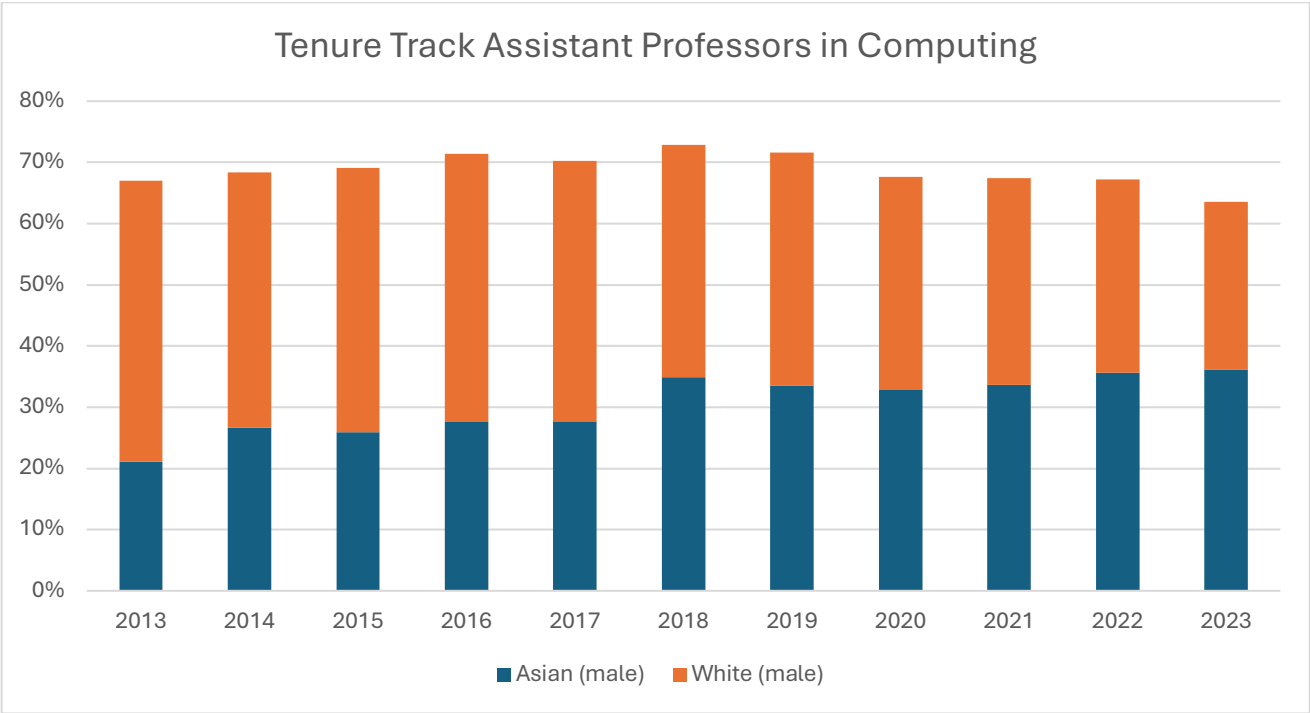
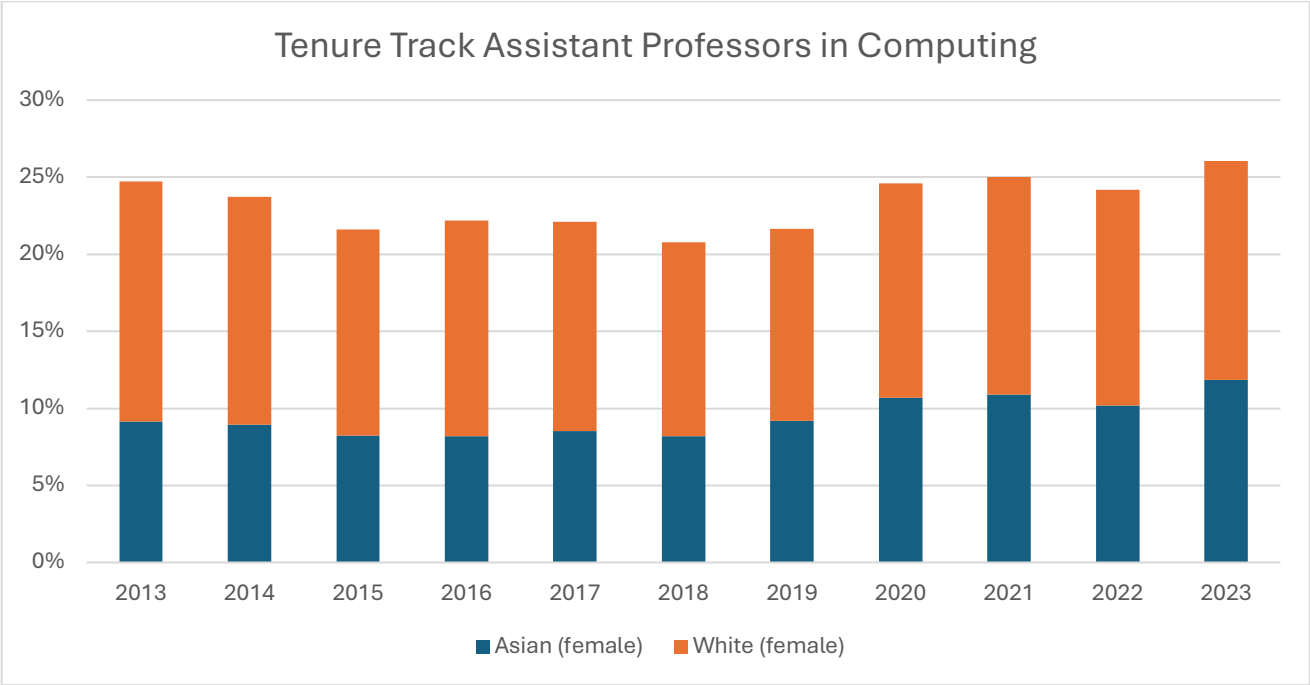


Figure 35 - Tenure track Assistant Professors by race/ethnicity and gender (Asian, White female) (2013-2023)



Appendix

Table 1 - Sample sizes for IPEDS degrees awarded data

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Associate's Degrees	23,402	23,854	24,928	25,642	27,001	29,093	28,162	29,268	31,206	31,770
Bachelor's Degrees	50,484	56,532	63,222	71,793	80,606	101,025	91,086	110,608	118,940	123,665
Master's Degrees	13,211	13,773	14,743	15,580	17,505	21,907	19,396	25,577	28,896	33,370
Doctoral Degrees	1,022	1,007	1,014	1,009	1,024	1,088	1,040	1,143	1,183	1,268

Note: Counts include all known racial/ethnic groups, and female and male faculty, but exclude unknown values and non-US residents.

Table 2 - Percentage of computing degrees awarded to Non-US Residents (2013 - 2022)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Associate's Degree	2%	2%	2%	2%	3%	3%	4%	4%	4%	3%
Bachelor's Degree	6%	6%	7%	7%	8%	9%	10%	11%	11%	11%
Master's Degree	49%	50%	59%	66%	67%	64%	58%	55%	57%	46%
Doctoral Degree	56%	59%	59%	60%	60%	60%	61%	62%	62%	63%

Table 3 - Associate's degrees awarded in computing by race/ethnicity (2013 - 2022)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
American Indian or Alaska Native	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Asian	6%	6%	6%	8%	8%	9%	9%	11%	10%	12%
Black or African American	11%	11%	12%	11%	11%	11%	12%	12%	12%	12%
Hispanic or Latino	11%	12%	13%	13%	14%	15%	16%	18%	17%	18%
Native Hawaiian or Other Pacific Islander	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Two or more races	2%	2%	2%	3%	3%	3%	3%	4%	4%	4%
White	69%	67%	66%	64%	62%	60%	59%	54%	56%	52%

Table 4 - Bachelor's degrees awarded in computing by race/ethnicity (2013 - 2022)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
American Indian or Alaska Native	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Asian	11%	12%	13%	14%	16%	17%	18%	19%	19%	21%
Black or African American	9%	9%	9%	8%	8%	8%	8%	9%	8%	9%
Hispanic or Latino	10%	11%	11%	12%	12%	12%	13%	14%	13%	14%
Native Hawaiian or Other Pacific Islander	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Two or more races	2%	3%	3%	4%	4%	4%	4%	4%	4%	4%
White	66%	65%	64%	62%	60%	58%	57%	54%	55%	52%

Table 5 - Master's degrees awarded in computing by race/ethnicity (2013 - 2022)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
American Indian or Alaska Native	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Asian	16%	16%	17%	19%	19%	19%	19%	21%	21%	22%
Black or African American	13%	13%	12%	13%	12%	13%	13%	12%	12%	11%
Hispanic or Latino	8%	9%	9%	9%	9%	10%	10%	10%	11%	11%
Native Hawaiian or Other Pacific Islander	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Two or more races	2%	2%	3%	3%	3%	3%	3%	3%	4%	4%
White	60%	59%	58%	56%	55%	54%	55%	53%	53%	51%

Table 6 - Doctoral degrees awarded in computing by race/ethnicity (2013 - 2022)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
American Indian or Alaska Native	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Asian	18%	16%	15%	14%	15%	16%	19%	18%	17%	19%
Black or African American	6%	6%	6%	7%	6%	6%	6%	9%	6%	9%
Hispanic or Latino	5%	5%	6%	5%	6%	6%	4%	7%	6%	7%
Native Hawaiian or Other Pacific Islander	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Two or more races	1%	1%	2%	3%	2%	3%	4%	4%	4%	4%
White	71%	71%	72%	70%	70%	69%	67%	62%	67%	61%

Table 7 - Percentage of computing degrees awarded to women (2013 - 2022)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Associate's Degree	22%	21%	21%	21%	21%	21%	21%	22%	22%	23%
Bachelor's Degree	19%	20%	20%	21%	22%	22%	23%	25%	24%	25%
Master's Degree	26%	28%	28%	29%	29%	30%	31%	33%	33%	35%
Doctoral Degree	20%	20%	22%	23%	27%	26%	27%	30%	27%	28%

Table 8 - Associate's degrees awarded in computing by race/ethnicity and gender (2013 - 2022)

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
American Indian or Alaska Native	men	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Asian	men	4%	4%	5%	6%	6%	7%	7%	8%	7%	8%
Black or African American	men	7%	8%	9%	8%	8%	8%	9%	9%	9%	9%
Hispanic or Latino	men	9%	9%	10%	10%	11%	12%	13%	14%	13%	14%
Native Hawaiian or Other Pacific Islander	men	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Two or more races	men	1%	2%	2%	2%	2%	3%	3%	3%	3%	3%
White	men	55%	54%	53%	51%	50%	49%	47%	44%	45%	42%
American Indian or Alaska Native	women	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Asian	women	1%	1%	1%	2%	2%	2%	2%	3%	2%	3%
Black or African American	women	3%	3%	3%	3%	3%	3%	3%	4%	4%	4%
Hispanic or Latino	women	2%	3%	3%	3%	3%	3%	3%	4%	4%	5%
Native Hawaiian or Other Pacific Islander	women	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Two or more races	women	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
White	women	15%	13%	13%	13%	12%	11%	11%	11%	11%	10%

Table 9 - Bachelor's degrees awarded in computing by race/ethnicity and gender (2013 - 2022)

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
American Indian or Alaska Native	men	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Asian	men	9%	9%	10%	11%	12%	12%	13%	13%	13%	14%
Black or African American	men	7%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Hispanic or Latino	men	8%	8%	9%	9%	9%	9%	10%	10%	10%	10%
Native Hawaiian or Other Pacific Islander	men	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Two or more races	men	2%	2%	2%	3%	3%	3%	3%	3%	3%	3%
White	men	55%	54%	53%	50%	48%	47%	45%	42%	44%	40%
American Indian or Alaska Native	women	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Asian	women	2%	3%	3%	4%	4%	5%	5%	6%	5%	6%
Black or African American	women	3%	3%	2%	2%	2%	2%	2%	3%	2%	3%
Hispanic or Latino	women	2%	2%	2%	3%	3%	3%	3%	3%	3%	4%
Native Hawaiian or Other Pacific Islander	women	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Two or more races	women	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
White	women	11%	11%	11%	12%	12%	11%	11%	12%	12%	11%

Table 10 - Master's degrees awarded in computing by race/ethnicity and gender (2013 - 2022)

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
American Indian or Alaska Native	men	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Asian	men	11%	11%	11%	12%	13%	13%	12%	13%	13%	13%
Black or African American	men	8%	8%	8%	8%	8%	8%	8%	7%	7%	7%
Hispanic or Latino	men	6%	6%	7%	7%	6%	7%	7%	7%	7%	7%
Native Hawaiian or Other Pacific Islander	men	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Two or more races	men	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
White	men	47%	45%	44%	42%	42%	40%	40%	37%	37%	35%
American Indian or Alaska Native	women	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Asian	women	5%	6%	6%	6%	7%	7%	7%	8%	8%	9%
Black or African American	women	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Hispanic or Latino	women	2%	2%	3%	3%	3%	3%	3%	3%	3%	4%
Native Hawaiian or Other Pacific Islander	women	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Two or more races	women	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
White	women	13%	14%	14%	14%	14%	15%	15%	15%	15%	16%

Table 11 - Doctoral degrees awarded in computing by race/ethnicity and gender (2013 - 2022)

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
American Indian or Alaska Native	men	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Asian	men	13%	12%	10%	9%	11%	10%	12%	12%	12%	13%
Black or African American	men	4%	4%	3%	4%	3%	4%	4%	6%	4%	6%
Hispanic or Latino	men	4%	3%	5%	4%	5%	5%	3%	6%	4%	5%
Native Hawaiian or Other Pacific Islander	men	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Two or more races	men	0%	1%	1%	2%	2%	2%	3%	3%	3%	3%
White	men	59%	59%	58%	57%	53%	53%	51%	44%	50%	45%
American Indian or Alaska Native	women	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Asian	women	5%	5%	4%	5%	4%	5%	7%	6%	5%	6%
Black or African American	women	2%	2%	2%	3%	2%	2%	2%	4%	2%	3%
Hispanic or Latino	women	1%	1%	1%	1%	2%	1%	1%	1%	2%	1%
Native Hawaiian or Other Pacific Islander	women	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Two or more races	women	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%
White	women	12%	12%	14%	13%	17%	16%	16%	18%	16%	17%

Table 12 - Sample sizes for Taulbee Survey data

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Tenure Track Assistant Professors	591	683	764	842	904	1063	1076	1029	1120	1228	1285

Note: Counts include all known racial/ethnic groups, and female and male faculty, but exclude unknown values and non-US residents.

Table 13 – Percentage of Non-US resident tenure track Assistant Professors in computing (2013–2023)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Non-US Resident	16%	11%	12%	15%	13%	14%	15%	16%	17%	16%	17%

Table 14 – Tenure track Assistant Professors in computing by race/ethnicity (2013–2023)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
American Indian or Alaska Native	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	2%
Asian	30%	36%	34%	36%	36%	43%	43%	44%	45%	46%	48%
Black or African-American	4%	4%	4%	3%	4%	3%	4%	4%	4%	3%	2%
Hispanic, any race	3%	2%	4%	2%	2%	3%	2%	3%	3%	3%	4%
Multiracial, not Hispanic	1%	1%	1%	0%	1%	0%	0%	1%	1%	1%	1%
Native Hawaiian/Pacific Islander	0%	0%	1%	0%	0%	0%	0%	0%	0%	1%	0%
White	61%	57%	56%	58%	56%	51%	51%	49%	48%	46%	42%

Table 15 – Percentage of female tenure track Assistant Professors in computing (2013–2023)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Female	28%	25%	25%	25%	25%	23%	24%	27%	28%	27%	30%

Table 16 - Tenure track Assistant Professors in computing by race/ethnicity and gender (2013–2023)

		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
American Indian or Alaska Native	female	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
Asian	female	9%	9%	8%	8%	9%	8%	9%	11%	11%	10%	12%
Black or African-American	female	2%	1%	2%	1%	2%	1%	2%	2%	2%	1%	1%
Hispanic, any race	female	1%	0%	1%	1%	1%	0%	0%	0%	0%	1%	1%
Multiracial, not Hispanic	female	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Native Hawaiian/Pac Islander	female	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
White	female	16%	15%	13%	14%	14%	13%	12%	14%	14%	14%	14%
Amer Indian or Alaska Native	male	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	2%
Asian	male	21%	27%	26%	28%	28%	35%	34%	33%	34%	36%	36%
Black or African-American	male	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%
Hispanic, any race	male	2%	2%	3%	2%	2%	2%	2%	3%	2%	3%	3%
Multiracial, not Hispanic	male	1%	1%	0%	0%	1%	0%	0%	1%	0%	1%	1%
Native Hawaiian/Pacific Islander	male	0%	0%	1%	0%	0%	0%	0%	0%	0%	1%	0%
White	male	46%	42%	43%	44%	43%	38%	38%	35%	34%	32%	27%

Table 17 – CIP codes included under “computing” in this report for IPEDS data

6-DIGIT CIP Code – CIP Code Name
9.0702 Digital Communication and Media/Multimedia
10.0304 Animation, Interactive Technology, Video Graphics and Special Effects
11.0101 Computer and Information Sciences, General
11.0102 Artificial Intelligence
11.0103 Information Technology
11.0104 Informatics
11.0105 Human-Centered Technology Design
11.0199 Computer Science, Other
11.0201 Computer Programming/Programmer, General
11.0202 Computer Programming Special Applications
11.0203 Computer Programming, Vendor/Product Certification
11.0204 Computer Game Programming
11.0205 Computer Programming, Specific Platforms
11.0299 Computer Programming, Other
11.0301 Data Processing and Data Processing Technology/Technician
11.0401 Information Science/Studies
11.0501 Computer Systems Analysis/Analyst
11.0701 Computer Science
11.0801 Web Page, Digital/Multimedia and Information Resources Design
11.0802 Data Modeling/Warehousing and Database Administration
11.0803 Computer Graphics
11.0804 Modeling, Virtual Environments and Simulation
11.0899 Computer Software and Media Applications, Other
11.0901 Computer Systems Networking and Telecommunications
11.0902 Cloud Computing
11.0999 Computer Systems Networking and Telecommunications, Other
11.1001 Network and System Administration/Administrator
11.1002 System, Networking, and LAN/WAN Management/Manager
11.1003 Computer and Information Systems Security/Information
11.1004 Web/Multimedia Management and Webmaster
11.1005 Information Technology Project Management
11.1006 Computer Support Specialist
11.1099 Computer/Information Technology Services Administration and Management, Other
11.9999 Computer and Information Sciences and Support Services

14.0901 Computer Engineering, General
14.0902 Computer Hardware Engineering
14.0903 Computer Software Engineering
14.0999 Computer Engineering, Other
26.1103 Bioinformatics
26.1104 Computational Biology
26.1199 Biomathematics, Bioinformatics, and Computational Biology, Other
27.0303 Computational Mathematics
27.0304 Computational and Applied Mathematics
30.0801 Mathematics and Computer Science
30.1601 Accounting and Computer Science
30.3001 Computational Science
30.3101 Human Computer Interaction
30.4801 Linguistics and Computer Science
30.7001 Data Science, General
30.7099 Data Science, Other
30.7101 Data Analytics, General
30.7102 Business Analytics
30.7103 Data Visualization
30.7104 Financial Analytics
30.7199 Data Analytics, Other
50.0102 Digital Arts
51.2706 Medical Informatics
52.1201 Management Information Systems, General
52.1203 Business Systems Analysis and Design

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