Claim 1: Termination Rates and Race

* Null Hypothesis: Termination status is independent of race
* Alternative Hypothesis: termination status depends on race

Claim 2: Pay Disparity Between Men and Women

* Null Hypothesis: The main salary of men equals the mean salary of women
* Alternative Hypothesis: The main salary of men and women differ

Claim 3: Performance Scores and Races

* Null Hypothesis: Performance evaluation scores are independent of race
* Alternative Hypothesis: Performance evaluation scores differ systematically

Based on results:

Alpha = 0.05 to ensure there are no to many false positives

Claim 1: Termination and Rates and Race

* X2(5) = 2.5620 p = 0.7671
* p > 0.05, we fail to reject the null hypothesis
* There is not statistically significant evidence that termination rates differ across racial groups. African Americans do have a slightly higher terminations rate than Whites (36% vs 33%) but the X2 test shows that it is not statistically significant.

Claim 2: Pay Disparity Between Men and Women

* Male salary mean: $70629.40 Female Salary Mean: $67786.73 p = 0.3203 t = 0.9956
* p > 0.05, we fail to reject null hypothesis
* There is a difference in mean salaries but according to the test, this disparity is not statistically significant.

Claim 3: Performance Scores and Races

* X2(15) = 18.1074 p = 0.25706
* t-test: t = -0.2388 p = 0.811481
* We fail to reject p because in both tests p > 0.05
* Minority and non-minority groups have nearly the same average performance scores. Mean score is 1.99. Upper range: 2.333 Lower Range: 1.727

Research Ethics: (company data gets leaked)

When should releasing the analysis of the data be ethical?

This would only be ethical when: the dataset is lawfully obtained/permission is granted, when all identifying info is removed to protect identity, and if there has been a proper ethics analysis by a ethics publishing group.

More on ethical perspectives:

* Utilitarian Perspective:
  + Benefit: Uncovering the analysis of the data could potentially uncover discriminatory practices, and help improve well-being for all employees
  + Harms: privacy violations for people whose data is in the analysis, if the analysis determines there are bad practices then companies may lose reputation.
* Deontological:
  + Data being stolen or unethically obtained violates property rights and privacy rights.
  + Even if there is a beneficial outcome, rights come first.