Class Survey Analysis Write Up

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Results

To explore whether students' preferences for project type and programming language vary depending on prior research experience, we conducted two chi-squared tests of independence.

Project Type Preference

A chi-squared test examined the association between students' prior research experience and their preferred project type (Industry, Lab, or Both).
The result was **not statistically significant**, $^2(2) = 0.13$, $p = 0.94$, indicating that students with and without prior research experience showed **similar distributions of project preferences**.
In other words, research experience does not appear to influence whether students prefer working on an industry or lab-based project.

Programming Language Preference

A second chi-squared test assessed the relationship between prior research experience and preferred programming language (Python, R, or mixed preferences).
This test was also **not significant**, $^2(3) = 1.42$, $p = 0.70$, suggesting that **students' programming language preferences are independent of their research experience**.

Summary of Findings

Test	^{2}	df	p-value	Interpretation
Project Type vs. Research Experience	0.13	2	0.94	No significant relationship
Programming Language vs. Research Experience	1.42	3	0.70	No significant relationship

Interpretation

Across both tests, the p-values were well above 0.05, indicating **no evidence of dependence** between prior research experience and either project or language preference.
This suggests that students' project and language choices are **likely influenced by factors other than**

research experience, such as coursework, personal interest, or perceived career applicability.
From a practical perspective, this finding implies that offering a range of project types and languages can accommodate students effectively, regardless of their prior research involvement.