

Investigating Academic Success Pathways for First-Time First-Year Students



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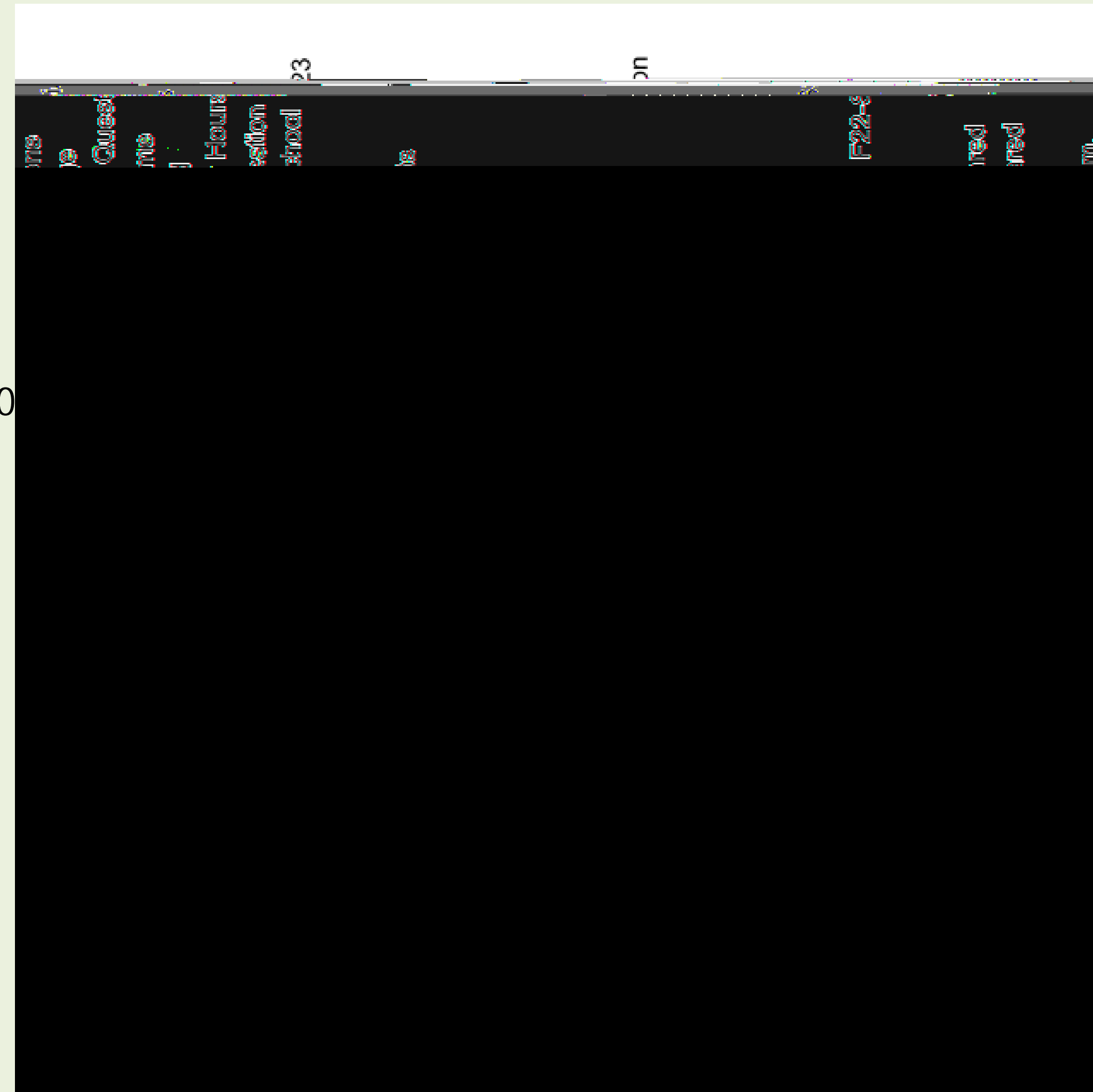
Student attrition poses a significant challenge in higher education today, impacting individuals, institutions, and society at large. It hampers efforts to promote equity and social mobility, wastes resources, and undermines institutional reputation and economic competitiveness.¹⁻³

This project aims to develop a **Student Performance and Retention Dashboard** enabling faculty and student support professionals to analyze how pre-matriculation data, both . Learn. Teach. 20

tion at CSULB: Interpretable Classification with Imbalanced
Advisor: Dr. Kagba Suaray, 2021, accessed at www.proquest.com.

ditional and academic factors affecting retention and major switching
en in Biology and Chemistry? Team members: Alarcon, C.,
, Marinez, E., Martin, L., Slowinski, K., Data Fellows Symposium,

udent Attrition, Developing a Predictive Retention Model, and
ncrease Student Persistence, Doshi, A., Ivezaj, L., Martin, N.,
Fellows Symposium, 2023.



MATH 104, 112A, and Intro Statistics (STAT 108, SOC 170, PSY 110, HDEV 190) are entry-level quantitative reasoning courses (General

Figure 1: A strong correlation of High School GPA (A-G) with obtaining DFWs in the first semester was observed. This correlation is still strong but decreases for the second semester. Student reported elements such as employment hours (especially >15h / week) and commute time length are predictors of DFWs. Some data is self-reported by the student at SOAR registration when indicated with (Student).

Conclusions / Discussion

Previous research pinpoints various factors influencing student retention, including academic history, demographics, socio-economic status, and student's belonging within the institution and the chosen field. While many models accurately predict the likelihood of student attrition among specific student groups, they often lack "local insights" applicable to specific courses, degree programs, or academic advising contexts.⁴⁻⁶

Over 30% of first-time first-year students received 1 or more of DFW grades in their first semester. First semester DFWs impact students' integration with the University community (sense of belonging) and their educational choices.

Our analysis indicates that DFW grade in B4 course received in student's first semester at CSULB has a dramatic impact on academic outcomes with attrition increasing 2- to 3-fold.

More accurate identification of students at risk for DFWs in their first-semester is critically important. Currently, more than 2/3 of students within the lowest HS GPA bracket (<3.0) earn one or more DFW grades in their first semester and face corresponding attrition rate.

Student Performance and Retention Dashboard could be used to identify additional "local factors" affecting student's performance in their first semester