

Academic Performance Dashboard

Key metrics and trends across academic
programs and student performance

By William Cry

Data Overview

3046

Students

17

Total Programs

3.49

Average CGPA

Dataset Overview:

- Comprehensive academic performance records of university students.

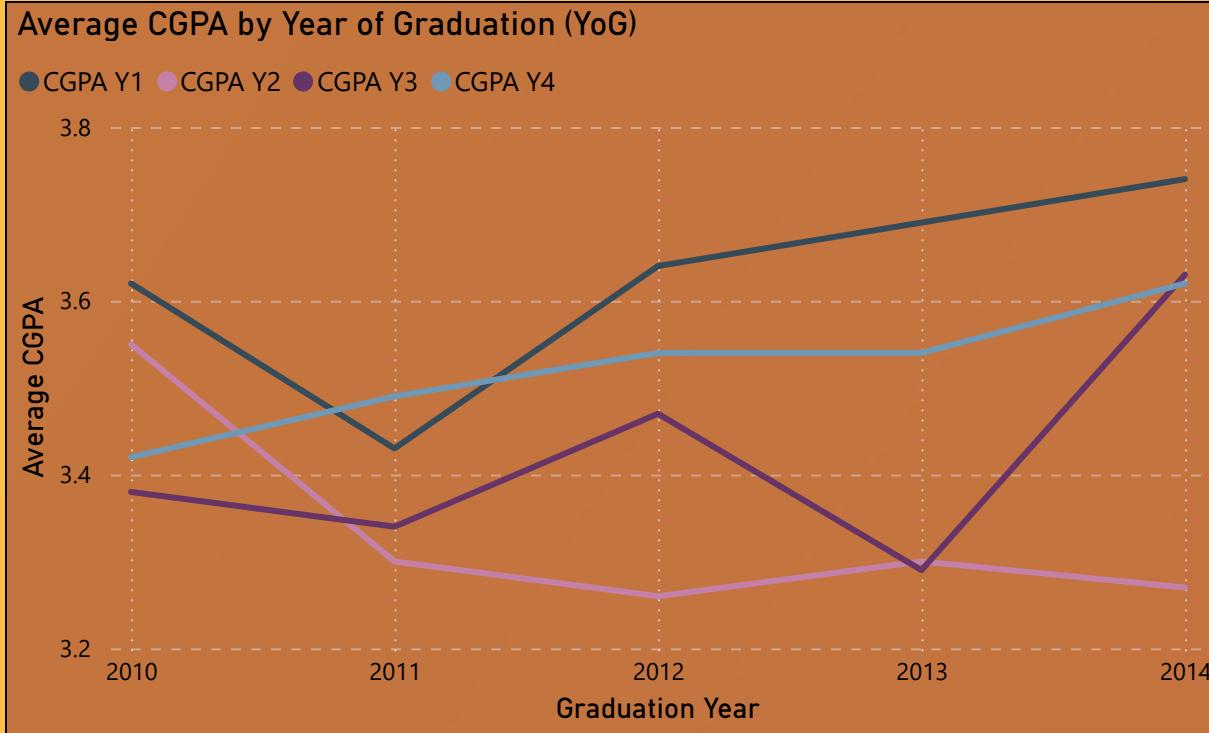
Key Metrics:

- CGPA:** Recorded at multiple stages:
- CGPA100:** First year
- CGPA200:** Second year
- CGPA300:** Third year
- CGPA400:** Final year
- SGPA:** Semester-wise performance.

Additional Data:

- Program Code:** Identifies the student's academic program.
- Year of Graduation (YoG):** Enables analysis of trends over time.
- Demographics:** Includes gender for deeper insights.

Year-to-Year Performance



3.49
Average CGPA

10' - 14'
Selected Years

3046
Students

52.82%
High Performers

Over the selected years (2010–2014), the average CGPA begins at 3.54 in 2010, remains near 3.49 to 3.46 for the next three years, and then increases to 3.61 in 2014—indicating a modest dip before a final rebound. Overall, the average CGPA across all selected years is 3.49, with 52.82% of students surpassing a 3.5 CGPA. These figures encompass a total of 3,046 students, reflecting a wide range of academic experiences and outcomes.

Male vs Female CGPA by Program

3.49

Average CGPA

-2.85%

Average Improvement

3046

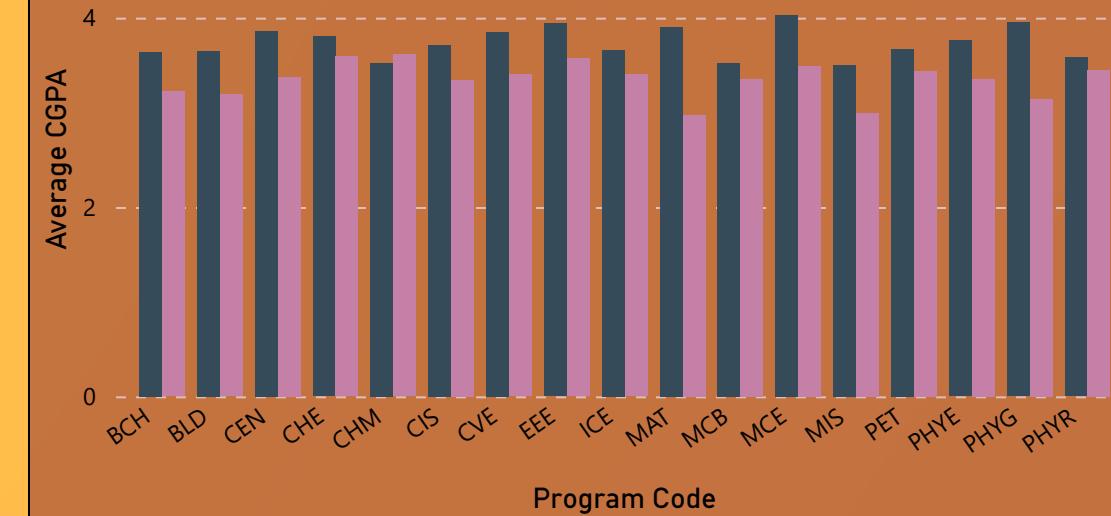
Students

17

Total Programs

Average CGPA by Gender and Program

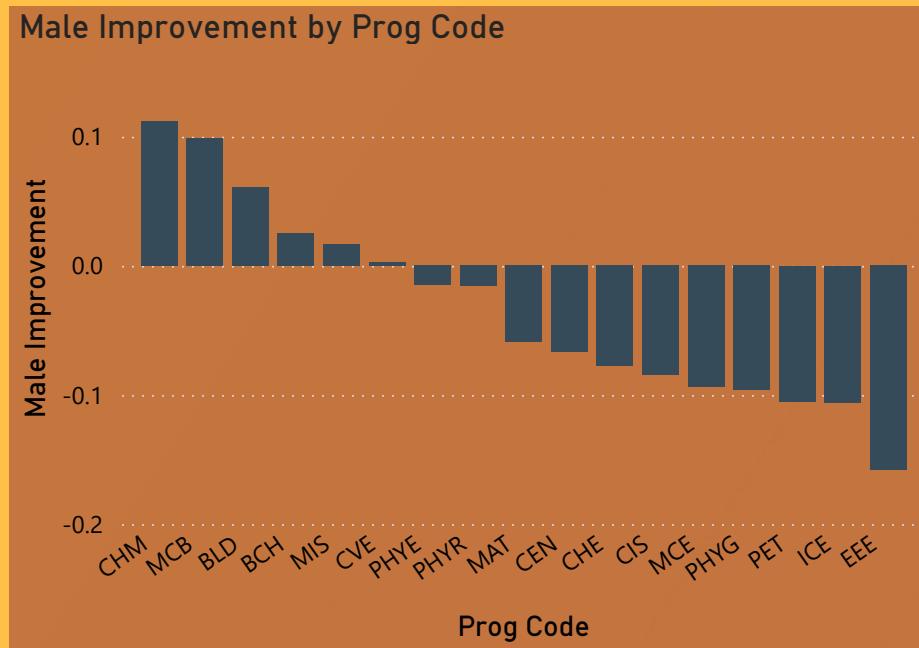
Gender ● Female ● Male



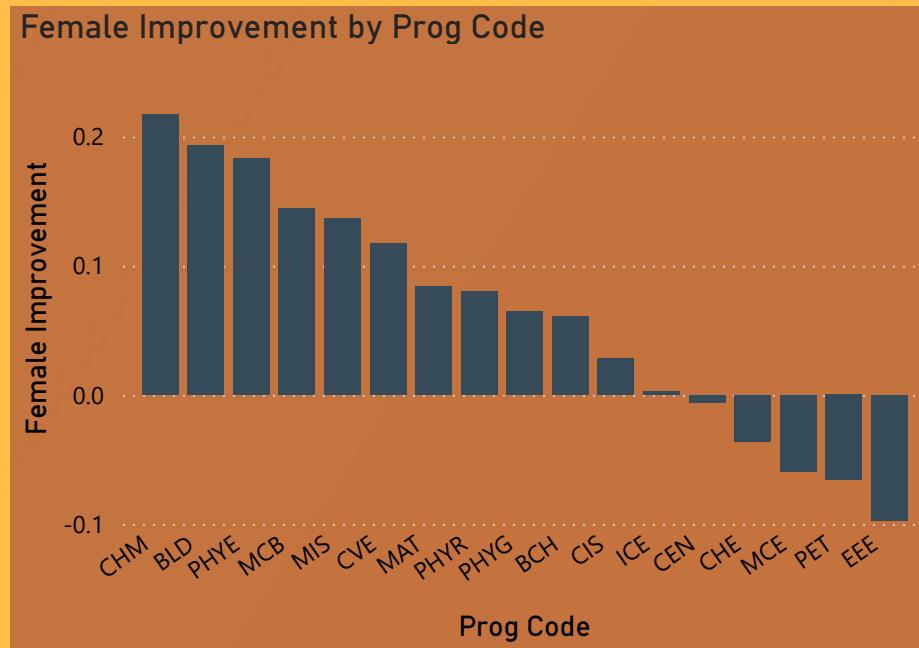
- Female Improvement = 4.78%
- Male Improvement = - 7.09%
- CIS is the only program where Males outperform Females

Male vs Female Improvement by Program

Male Improvement by Prog Code



Female Improvement by Prog Code



860

M vs F Student Count

-0.07

Male Improvement

0.05

Female Improvement

-0.12

Improvement Difference

- Female students show a 12 percentage point higher improvement from first-year to final-year CGPA compared to male students.
- In every academic category examined, female students demonstrate higher improvement rates.
- There are 860 more male students than female students in the dataset.
- Despite a larger male population, female students consistently outperform in improvement, suggesting potential differences in study habits, engagement, or academic support.

Takeaways

Key Findings

- Female students improve their CGPA by approximately 12% more than male students from first year to final year.
- In nearly all programs, females show higher improvement, with the only exception being the CIS program where males perform better.
- The overall average CGPA trends indicate consistent performance differences between genders despite a higher male student count.
- Even with 860 more male students in the dataset, the performance metrics favor female students in terms of improvement.

Implications

- The results may suggest that female students value their education more, showing greater commitment and engagement in their academic pursuits.
- Consistent improvement among females could indicate that they are more proactive in seeking out learning opportunities and overcoming challenges.
- The performance disparity points to the need for further exploration into the motivational and behavioral factors driving these trends.
- The anomaly in the CIS program suggests that program-specific factors might influence performance differently by gender, warranting deeper investigation.

Limitations & Recommendations

Limitations

- The analysis relies solely on quantitative data, which may not capture all aspects of student experiences (e.g., motivation, extracurricular involvement).
- External factors (such as socioeconomic background or access to academic support) were not included, potentially affecting the results.
- The dataset's composition (with a higher number of male students) could introduce sampling biases.
- Additional variables, such as attendance or participation metrics, could provide a more comprehensive view of academic performance.

Recommendation

- Conduct further research to explore the underlying reasons for the gender differences in academic improvement.
- Implement qualitative studies (e.g., student surveys or focus groups) to gain deeper insights into the support systems influencing performance.
- Consider targeted interventions in programs where performance gaps are significant, particularly supporting male students outside of the CIS program.
- Expand the analysis by incorporating additional demographic and behavioral variables for a more holistic understanding.

Project Files

GITHUB

Includes:

- Dataset
- SQL Scripts
- PowerBI Files & Outputs