

Activity 3: Strategic Recommendations for Student Success

1. Purpose

The objective of this document is to outline targeted intervention strategies based on the Machine Learning clustering results. By addressing the specific needs of each segment, the institution can improve retention rates, mental health outcomes, and career placement success.

2. Recommendations by Cluster

Category 1: At-Risk Students (Red & Yellow Groups)

Goal: Immediate Stabilization and Risk Mitigation

- **Academic Intervention:** Enrollment in a mandatory "Academic Recovery Program" including one-on-one tutoring for subjects showing low APS (Academic Performance Scores).
- **Mental Health Support:** Proactive outreach from the counseling department for students with high stress levels. Implementation of "Wellness Credits" to encourage improved sleep and stress management (WWS).
- **Early Warning System:** Automated notifications to faculty advisors when a student's SRI (Student Risk Index) drops below 50.

Category 2: High Performers (Green Group)

Goal: Excellence, Retention, and Peer Leadership

- **Peer Mentorship:** Recruit these students as paid or credit-earning peer mentors for the "At-Risk" cluster. This reinforces their own learning while supporting the community.
- **Advanced Research/Internships:** Provide early-access pathways to prestigious internships or undergraduate research grants to keep engagement levels high.
- **Exemption Programs:** Allow for flexible attendance or assignment deadlines to reward their high PTMS (Productivity and Time Management Score).

Category 3: Career-Confused Students (Low CRS Segment)

Goal: Professional Clarity and Skill Alignment

- **Career Counseling:** Focused 1-on-1 sessions with career coaches to bridge the gap between academic success and professional direction.
- **Skill-Gap Analysis:** Use the Skill Readiness data to suggest specific certifications (e.g., Coursera, LinkedIn Learning) that align with their chosen program.
- **Industry Job Shadowing:** Pair these students with alumni in their field of study to provide a "real-world" perspective on their career path.

Category 4: Stable/General Students (Blue Group)

Goal: Continuous Improvement and Prevention

- **Productivity Workshops:** Optional seminars on advanced time management and digital distraction management to help push them into the "High Performer" category.
- **Social Integration:** Encourage participation in student organizations to maintain high mental wellbeing and social belonging.

3. Implementation Timeline

- **Week 1:** Identification of "Red" zone students and initial counseling outreach.
- **Week 2-4:** Launch of tutoring and career coaching sessions.
- **End of Semester:** Re-run the ML Clustering model to measure the movement of students between clusters.

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