HEPro AI/ML Internship

Activity 3 – Cluster-Based Mentoring Recommendations

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Project: Dedicated Mentoring System for Students (HEPro AI+)

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1. Overview

Machine learning segmentation enables the development of targeted mentoring strategies tailored to different student profiles. The following recommendations are derived from cluster-based analysis.

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2. Recommendations by Cluster

🔴 **At-Risk Students**

Needs Identified:

- Academic support
- Career clarity
- Confidence building

Recommended Mentoring Actions:

- Weekly mentor check-ins
- Structured academic improvement plans
- Career exploration sessions
- Wellness monitoring

🟡 **Productivity Risk Students**

Needs Identified:

- Time management improvement
- Engagement enhancement

Recommended Mentoring Actions:

- Productivity coaching programs
- Goal-setting and planning frameworks
- Study habit optimization
- Distraction reduction strategies

🔵 **Stable Students**

Needs Identified:

- Performance consistency
- Motivation reinforcement

Recommended Mentoring Actions:

- Monthly mentoring sessions
- Progress monitoring dashboards
- Skill enhancement activities
- Continuous feedback loops

🟢 **High Performer Students**

Needs Identified:

- Growth acceleration
- Leadership development

Recommended Mentoring Actions:

- Advanced career mentoring
- Research or project challenges
- Peer mentoring roles
- Internship readiness guidance

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3. Impact of Cluster-Based Mentoring

Cluster-driven recommendations allow mentors to prioritize effectively, improve engagement, and deliver personalized support at scale. This approach enhances decision-making while maintaining transparency.

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4. Conclusion

The integration of machine learning insights with structured mentoring strategies strengthens the HEPro AI+ mentoring system by transforming data into actionable guidance.