Charting the Future

Phase 3

Update

Board of Trustees - January 2024

Project Overview

- Grant Funded through the Lilly Endowment Inc.
- University of Southern Indiana partnered with the University of Indianapolis and other private institutions across Indiana
- Overarching goal is to address the challenge of student retention in higher education institutions in Indiana
- Leveraging innovative and adaptable solutions improve decision-making processes through data-driven approaches

Project Components

Process Improvement

- Training Greenbelts to develop strategies using Six-Sigma Process

Retention Prediction Model Development and Deployment

- Collaborate with Consultant Team to develop an institution specific retention model and tool

Data Resources & Intervention Development

- Enhance Data Infrastructure to provide data tools for decision support

Retention Prediction Model

- Partnered with Resultant
- Based in Indianapolis
- Founded 2008 as KSM Business Technology

Retention Prediction Model

Project Phases

1. Data Discovery
2. Model Tailoring & Intervention Recommendation
3. Intervention Tool Rollout
4. Model Support

Outcomes

1. Understanding factors that impact retention for each student
2. USI-specific model to identify students at risk of leaving the university, along with their risk factors and success factors
3. Confidence in working with the retention model
4. Increased student retention through targeted interventions

Theoretical Approach

Principle Factors Predicative of Student Retention

- Belonging and Integration
- Academic
- Financial
- Demographic
- Institutional

The model is specifically tailored to USI, leveraging currently available data

Theoretical Approach

Sample Variables

Major	Work Responsibilities	Financial Literacy	Courses
Ability to Pay	Geographic Origin	Assisting Engagement	Social Support
Faculty	Gender	Parental Support	Family Responsibilities
Scholarships	Academic Belonging	Course Difficulty	Student Engagement
Capability	Peer Belonging	Willingness to Pay	First Generation

Theoretical Approach

Academic	Demographic	Belonging/ Integration	Institutional	Financial
Capability	Work Responsibilities	Academic Belonging	Assisting Engagement	Ability to Pay
Courses	Gender	Peer Belonging	Faculty	Financial Literacy
Course Difficulty	Geographic Origin	Student Engagement	Social Support	Scholarships
Major	Parental Support	Athletics		Willingness to Pay
Scholarships	Family Responsibilities			

Theoretical Approach

Academic	Demographic	Belonging/ Integration	Institutional	Financial
Capability	Work Responsibilities	Academic Belonging	Assisting Engagement	Ability to Pay
Courses	Gender	Peer Belonging	Faculty	Financial Literacy
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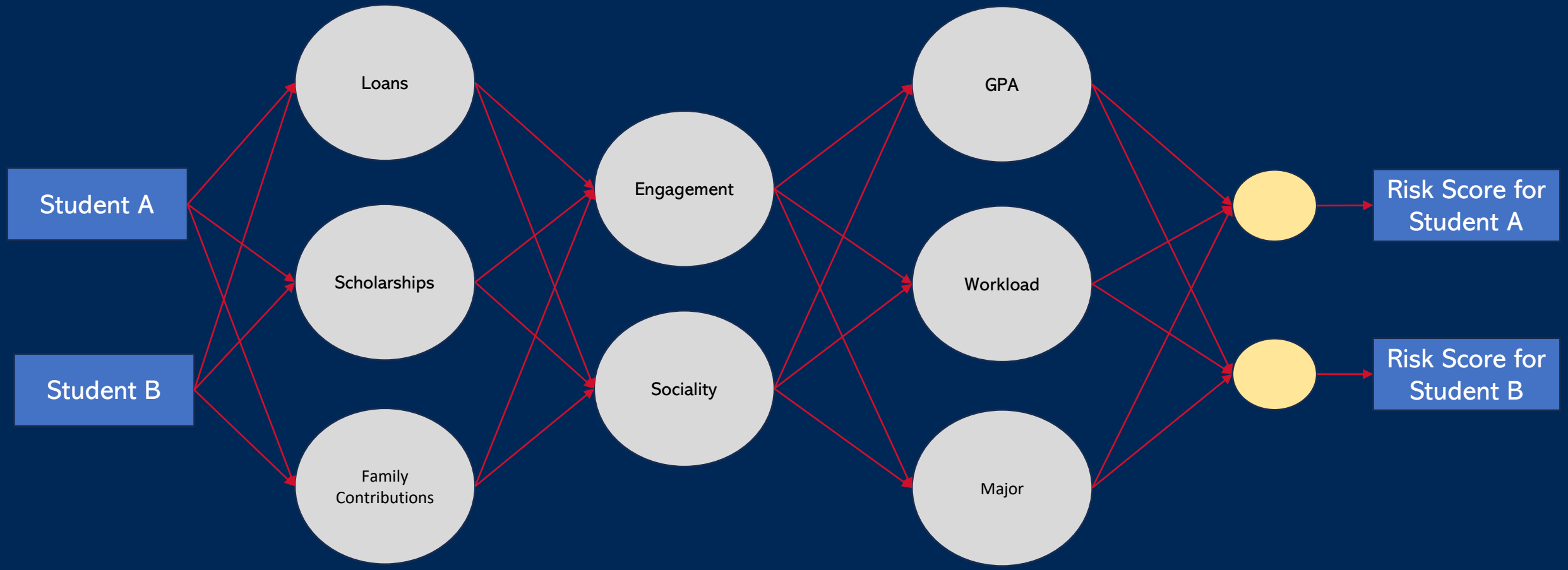
Major	Parental Support	Athletics		Willingness to Pay
Scholarships	Family Responsibilities			

Data Coverage

- Good
- Partial
- Poor

Theoretical Approach



Data Discovery

Met with Data Managers (DM) across campus to understand the data available

- Registrar's Office
- Student Financial Assistance
- Undergraduate Admissions
- Business Office - Accounts Receivables
- University Division

Worked with the DMs and IT to identify key data elements that could feed the model

Data Tool

Student Success Score

- Two actual scores
- Reflects the probability a student will retain to the next semester & next year
- 0 to 100
- Higher score = higher likelihood of retention

Updated weekly

Identifies the Risk and Success Factors for each student

Student ID	First Name	Last Name	Major	Cohort Year	Success Score (End of Semester)	Success Score (End of Year)	Change in Score (End of Semester)
			Pre-Nursing BSN	2023	⚠ 3	⚠ 19	0
			Art	2023	100	93	0
			Undecided	2023	95	62	0
			Business Admin (...	2023	⚠ 1	⚠ 4	0
			Undecided	2023	99	93	0
			Electrical Enginee...	2023	100	97	0
			Pre-Diagnostic M...	2023	100	86	0
			Mechanical Engi...	2023	100	95	0

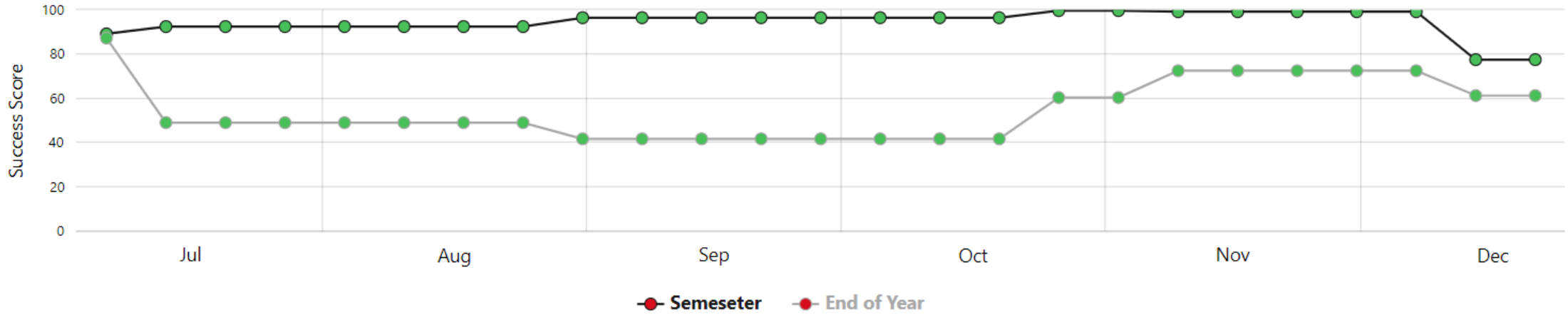
Success Scores: [End of Semester]: 78 [End of Year]: 61

Major(s):	Radio and Television	**Total Credits Attempted:**		**Cohort Year:**	2023
Minor:		**Total Credits Earned:**		**Enrollment Type:**	Full Time
Concentration:		**High School GPA:**		**Ethnicity:**	
College:	College of Liberal Arts	**Current GPA:**			
Department:	Communication and Media				
Class:	F1				

PROFILE

Success Scores Over Time

Average Success Score: 94



Top Risk Factors

Factor	Category
Registered Credits has value 13.0. This may shift the student retention success score to medium tier.	academic
Midterm Credits Percentage (failed) has value 0.46. This may shift the student retention success score to medium tier.	academic
Midterm Credits (failed) has value 6.0. This may shift the student retention success score to low tier.	academic
Midterm GPA is 1.64. This may shift the student retention success score to medium tier.	academic
Course Structure has value Intro-Rhet &Comp, Academic Reading Strategies, Intro to Public Speaking, FYE-College of Liberal Arts, Understanding Media, Foundations Quant Reasoning. This may shift the student retention success score to low tier.	enrollment
Midterm Credits B- and below is 0.69. This may shift the student retention success score to medium tier.	academic
High School GPA Percentile has value nan. This may shift the student retention success score to low tier.	pre-entry
Midterm Credits (B- and lower) has value 9.0. This may shift the student retention success score to low tier.	academic
Course structure risk is 0.48. This may shift the student retention success score to low tier.	enrollment
Total Credits has value 13.0. This may shift the student retention success score to medium tier.	enrollment

Top Success Factors

Factor	Category
College has value College of Liberal Arts. This may shift the student retention success score to high tier.	enrollment
Is Indiana Resident has value 1. This may shift the student retention success score to high tier.	demographics
Student account balance has value 0.0. This may shift the student retention success score to high tier.	financial
High School Size has value nan. This may shift the student retention success score to high tier.	pre-entry

Data Tool Plans

Begin Pilot with College Advising Center this spring

Integrate with Slate - Student Success Module

Provided feedback to Resultant for additional tool improvements

- Detailed Summary Reports
- Data Export for additional analysis
- Model Performance Evaluation tools

Data Resources Development

Campus Specific Project to USI

Working to develop a data resource that

- Integrates USI's existing data sources into a central resource that can be accessed for reporting and analysis
- Automates the extraction, transformation, and loading of commonly used data for reporting and analysis, initially for enrollment management

Data Resources Development

Built out Storage Area Network (SAN) data warehouse environment to provide additional data warehousing space as well as improved speed

Data Warehouse Architect hired

Currently taking inventory of institutional needs to develop the data technology stack to support institutional reporting and analytics

Data Resources Development

Renamed unit the Institutional Analytics Office

- formally Office of Planning, Research, and Assessment

Refocused USI's institutional research unit

Charting the Future Summary

USI participation in the collaboration on the grant has

- provided resources to advance the Strategic Plan goal to Improve Student Success
  - Process Improvement: Utilizing Six-Sigma Process training to enhance support processes
  - Student Retention Prediction Model Development
  - Expansion of data resources for improved decision support

- Helped to advance a data informed culture across campus

Thank you