

informatics MAPD 2026

Meeting of Analytics
Program Directors



10th Annual Meeting
Washington, DC
April 11, 2026



Organizing Committee



Babak Zafari
Georgetown University



Matthew Lanham
Butler University



Kathleen Conway
Carnegie Mellon University



Alistar Erickson-Ludwig
Duke University



Lisa Dubler
Georgetown University



Stephen Hill
Samford University



Diana Chávez
UC Berkeley



Chalam Narayanan
University of North Texas

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Stephen Hill
Samford University



Diana Chávez
UC Berkeley



Chalam Narayanan
University of North Texas



Bill Griffin
INFORMS

Agenda

9:00-9:15AM	Welcome and Introductions (<i>Babak Zafari, Chair</i>)
9:15-9:30 AM	INFORMS & MAPD Updates (<i>Bill Griffin</i>)
9:30-10:30 AM	Panel: Analytics Program Changes in the AI Era <i>Kathleen Conway (Carnegie Mellon University), Alistar Erickson-Ludwig (Duke University), Babak Zafari (Georgetown University)</i>
10:30-10:45 AM	BREAK
10:45-11:00 AM	Data4Good Competition - <i>Matthew Lanham (Butler University)</i>
11:00-12:00 PM	Small Group Session #1

12:00-1:00 PM **LUNCH** (*Annapolis Room 1*)

1:00-1:30 PM	AI & Analytics Demo Showcase • Innovations in Experiential Learning with GenAI - <i>Scott Radcliffe (Emory University)</i> • AI-Powered Data Analysis - <i>Stephen Hill (Samford University)</i>
1:30-2:45 PM	Small Group Session #2
2:45-3:00 PM	BREAK
3:00-3:25 PM	Pioneer Sponsor Presentation - <i>Gurobean</i> <i>Presented by Gurobi Optimization</i>
3:30-4:30 PM	Industry Panel: Career Readiness & Hiring Trends <i>Robbie Brusso (Amazon), John Gale (Synchrony), Christopher Carlson (MANTECH), Lisa Dubler (Georgetown University), Diana Chavez (UC Berkeley)</i>
4:30-4:45 PM	Wrap-up & Next Steps (<i>Babak Zafari & Bill Griffin</i>)

5:00-6:30 PM **Networking Reception**



INFORMS & MAPD Updates



Bill Griffin
INFORMS

- Legacy circles
- CAP Academic Pathway
- More to MAPD? Competitions?

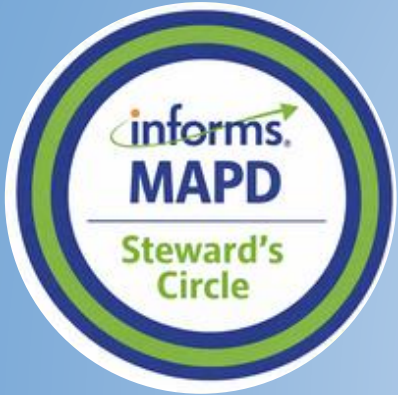
MAPD Cornerstone Award



Melissa Bowers

- Co-authoring the original MAPD proposal to the INFORMS Board
 - Serving on MAPD's earliest organizing committees
 - Championing MAPD as INFORMS Vice President for Education
- Advocating for Board engagement with MAPD and elevating its visibility
- A career-long commitment to improving student outcomes through collaboration

MAPD Steward's Circle



6 or more MAPD registrations: Recognizes individuals deeply embedded in MAPD across much of its history.

De Liu · Jeffrey Camm · Matthew Lanham · Ann Blasick · Goutam Chakraborty · James Cochran · Alistar Erickson-Ludwig · Candice McLemore · Charles Cwiek · Charu Chandra · Melissa “Missie” Bowers · Sharif Melouk · Sherrill Hayes · Stephen Hill

MAPD Sustaining Leaders



4-5 MAPD registrations: Recognizes consistent contributors who helped carry MAPD forward year after year.

Andrew Urbaczewski · Dirk Van den Poel · Douglas Lehmann · Edward Pohl · Harish Krishnan · Jennifer Ryan · John Colias · John White · Lakshmi Iyer · Michelle Li · Mike Fry · Myra Gonzalez · Sanjay Saigal · Albert Chan · Bill Hefley · Carrie Beam · Cherie Fu · Christopher Solo · Cody Baldwin · Daniel Eilen · Frank Armour · Giada Tridello-Mattern · Jennifer Priestley · Matthew Bailey · Ramesh Sharda · Robert McGrath · Steve Moss

MAPD Community Builders



2-3 MAPD registrations: Recognizes individuals who strengthened the MAPD community through repeat engagement.

Abbass Sharif · Arunachalam Narayanan · Bill Franks · Bradden Blair · Cem Canel · Durai Sundaramoorthi · Eric Eisenstein · Frank Alt · Gaurav Shekhar · Ginger Baxter · Glenn Wegryn · Huy Huynh · Janet Moss · Jason Xiong · Joseph Cazier · Joseph Wilck · Juan Jaramillo · Kashif Saeed · Ken Murphy · Kyle Hofer-Mora · Nickolas Freeman · Patrick Johanns · Raha Akhavan-Tabatabaei · Scott Radcliffe · Severin Grاسبki · Shannon McKeen · Stephen Custer · Steve Robertson · Tom Groleau · Yusen Xia · Zahra Sedighi-Maman · Alli Snyder · Alper Atamturk · Ashwin Aravindakshan · Austin Brown · Babak Zafari · Bill Rand · Chan Voong · Chester Chambers · Christopher Morrell · Cliff Ragsdale · Connie Bannister · Diana Chavez · Dilip Chhajed · Dmitry Krass · Donna Ehrlich · Drew Paulin · Eric Haddleton · Erica Hodes · Gayle Nelson · Gopalakrishnan Easwaran · Guillermo Rodriguez Abitia · Harry Zhu · Ion Nemteanu · Isabel Rodriguez Tejedo · Ivan Mura · Jay Page · Jaymeen Shah · Jennifer Havens · Joe Crombie · Jordan Gill · Joshua Hertel · Juan Lalinde · Juan R. Jaramillo · Julie Hummel · Kari Calvario · Kathryn Caggiano · Katie Mulheron · Keith Werle · Kevin Dietrick · Kristin Branch · Kristin McCann · Li Zhang · Linda Christie · Liz Matthews · Lulu Kang · Luvai Motiwalla · Manish Gangwar · Manoj Vanajakumari · Matthew Williams · Michael Rappa · Naser Nikandish · Ozgur Araz · Philip Goldfeder · Rakesh Niraj · Ramnath Chellappa · Randy Napier · Rei Sanchez-Arias · Robert Dell · Rouzbeh Razavi · Sanjeev Dewan · Scott Nestler · Shahram Taj · Sinan Tas · Stefannie Aguilar · Stella Salvatierra · Tamer Abdou · Tao Li · Tao Pang · Terry Harrison · Thomas Sloan · Titun R. Maiti · Vinayak Deshpande · Willem-Jan van Hoeve · Yue Huang · Yunxia (Peter) Zhu · Zhaohu (Jonathan) Fan

Panel: Analytics Program Changes in the AI Era



Babak Zafari
Georgetown University



Kathleen Conway
Carnegie Mellon University



Alistar Erickson-Ludwig
Duke University

Curriculum Transformation & Student Readiness

- *Biggest curriculum change in response to AI*
- *New courses vs. existing courses redesigned or eliminated*
- *Skills that dropped in priority vs. what rose to the top*
- *AI as stand-alone or integrated into other courses*
- *Students' readiness and propensity to adopt AI tools*

Assessment & Academic Integrity

- *Changes made to assessment methods*
- *Academic integrity*

Faculty Capacity & Road Ahead"

- *Faculty talent and capacity to teach new AI content*
- *Questions you're still figuring out or decisions pending*

Data4Good



Matthew Lanham
Butler University

Catalog ▾AI Upskilling ▾Resources ▾Pricing ▾For BusinessFor Universities🔍🌐ENLog InGet Started

Data4Good 2025 - National Student Competition

The Data4Good Competition is a national challenge for undergraduate and master's students to tackle real-world cases using data analysis and AI. Participants can win prize money and gain free training and certifications. Judges will select winners and runners-up in each U.S. region, with regional winners invited to present at The Johns Hopkins University Carey School of Business.

[Register Your Team](#)

Teams of 3-4 students

Teams must register as groups of 3-4 students — all undergraduate or master's students (no PhD students), as the evaluation varies based on education level. One student can submit the registration form on behalf of their team.

School & Region

While the competition is open to everyone, prize eligibility will only consider students pursuing an undergraduate or master's degree in the United States and Canada. Teams must specify their school and US region in the team registration form.

Academic Emails

All participants must use academic emails (e.g., .edu) to register and participate in all competition events. Please ensure you use the same email address in every form you fill out throughout the competition.

<https://www.datacamp.com/event/data4goodcompetition>

Thank you, sponsors!



UC Berkeley
Master of Analytics



Carnegie Mellon University
Tepper School of Business



<https://www.datacamp.com/event/data4goodcompetition>

A points-based competition with a case challenge.



Matthew Lanham
Butler University

Launch Date	Event	Deadline	Link	Individual points (max)	Team points (max)	Percent
10/17/25	Competition Kickoff! (Webinar)	11/14/25	Join	250	750	4.67%
Can begin anytime	Team Registration Window	10/31/25	Register	N/A	N/A	N/A
10/31/25	INFORMS Analytics Framework™ (IAF™): The Proven Guide to Developing Analytics Solutions (Webinar)	11/31/25	Join	250	750	4.67%
11/10/25	Mastering AI-900: Microsoft Azure AI Fundamentals Training (3 hours Webinar)	12/10/25	Join	250	750	4.67%
11/14/25	Unlocking SAS Academic Resources (Webinar)	12/14/25	Join	250	750	4.67%
10/31/25	Business Problem Framing Free Course (code to take course for free will be shared on 10/31/2025)	12/24/25	Complete	250	750	4.67%
12/05/25	Using "The Hero's Journey" In data and AI (Webinar)	12/20/25	Join	250	750	4.67%
Can begin anytime	Complete AI-900: Microsoft Azure AI Fundamentals Certification Score	12/18/25	Register to take the exam or upload your scores from last year	1000	3000	18.69%
Can begin anytime	Complete SAS Badge (pick one among two available tracks)	12/31/25	Complete	850	2550	15.89%
Can begin anytime	Case Challenge Submissions	01/11/26	Solve Case	2000	6000	37.38%

<https://www.datacamp.com/event/data4goodcompetition>

A “good” problem each year



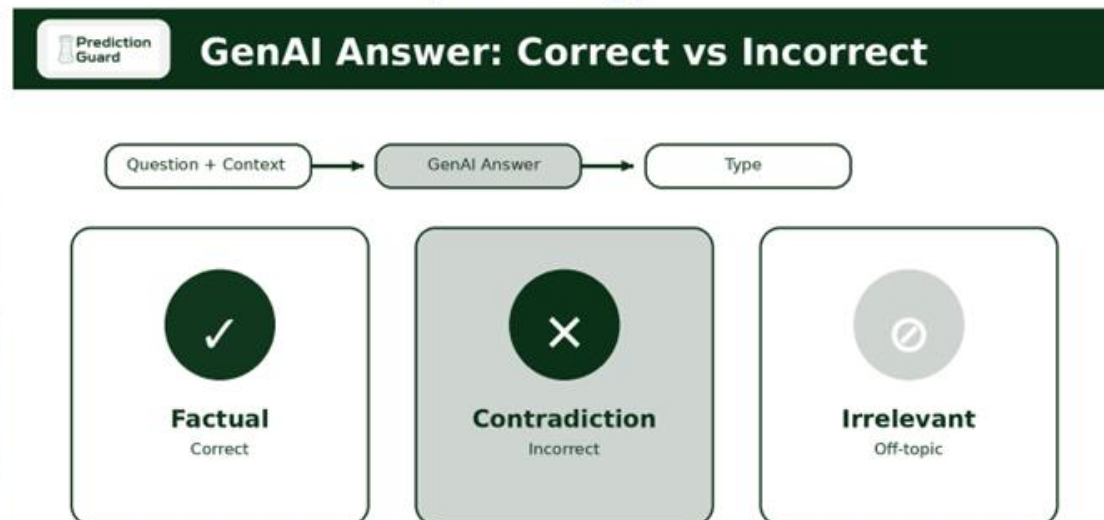
2022 – Captioning images in Children’s books
(SIL Global / Dan Whitenack)



2023 – LLMs in Healthcare (Prediction
Guard’s client / Dan Whitenack)



2024 – Understanding stages of grief
(TAPS.org)

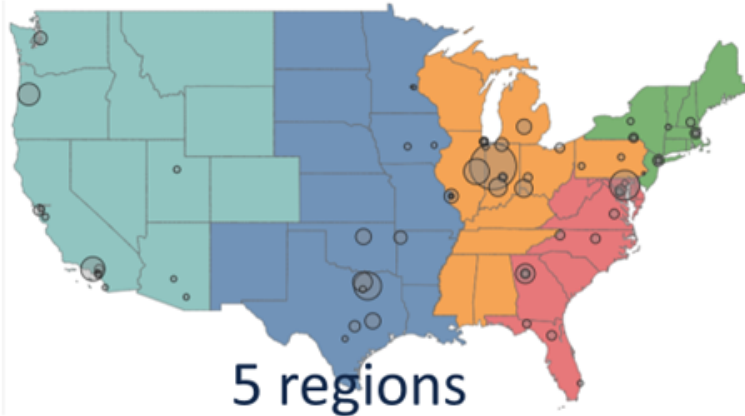


2025 – GenAI reliability (Prediction Guard / Dan
Whitenack / Todd Bordner)

Largest reach ever this year!

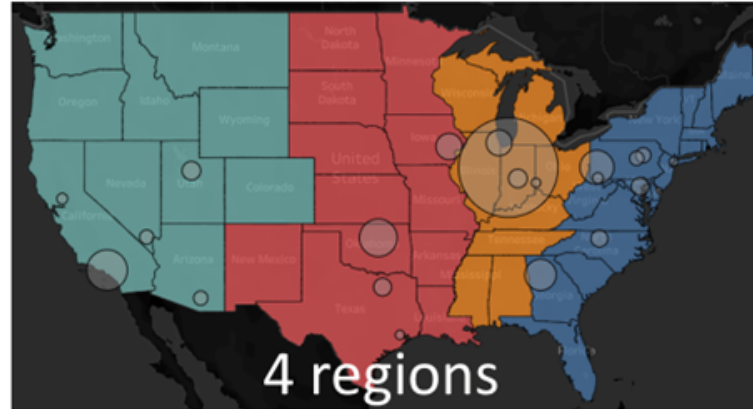
2023

- \$45,000 in prizes
- 95% passed AZ-900
- 290 teams
- 1031 students
- 72 universities



2024

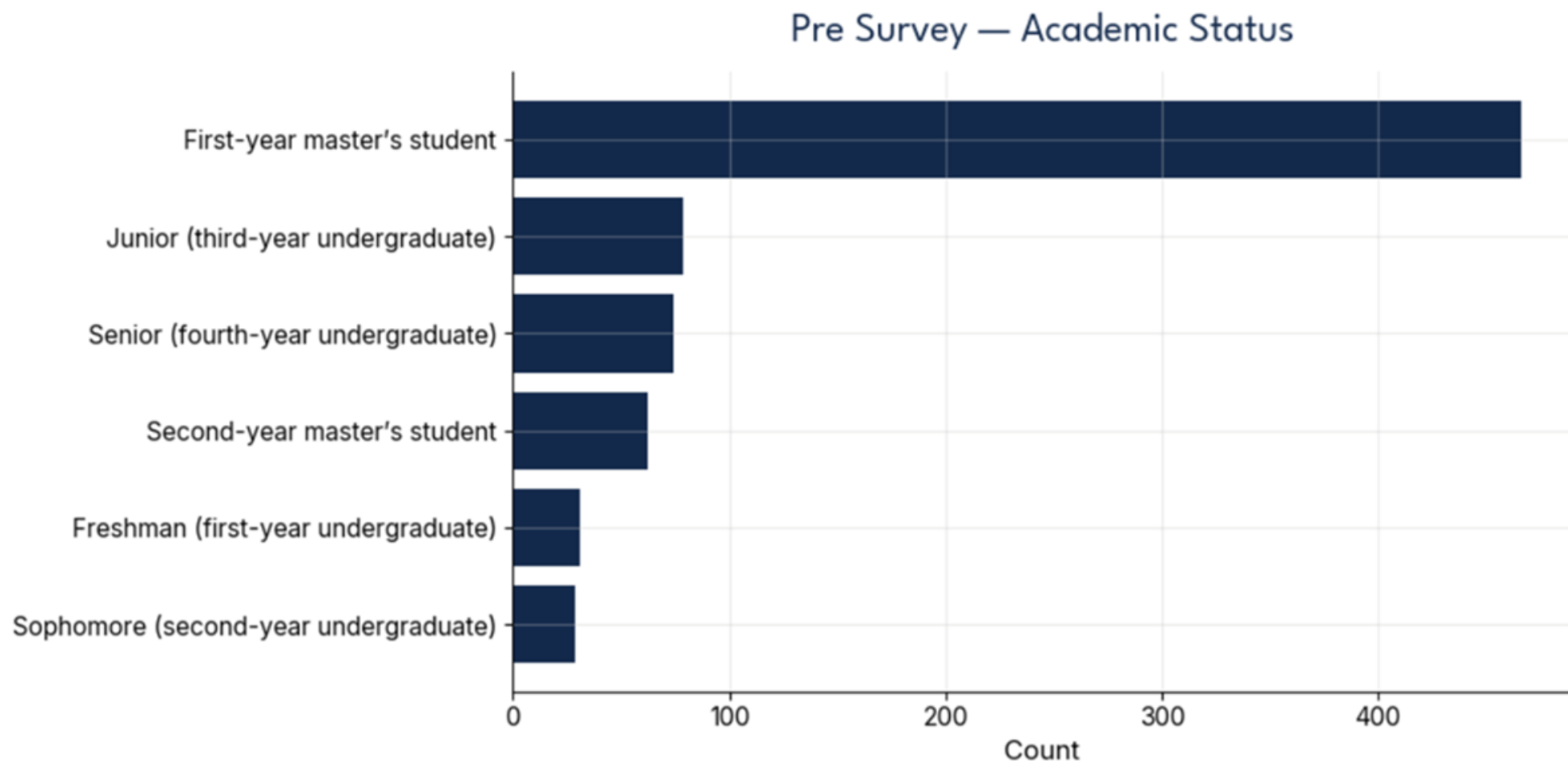
- \$40,000 in prizes
- 96% passed AI-900
- 243 teams
- 931 students
- 35 universities



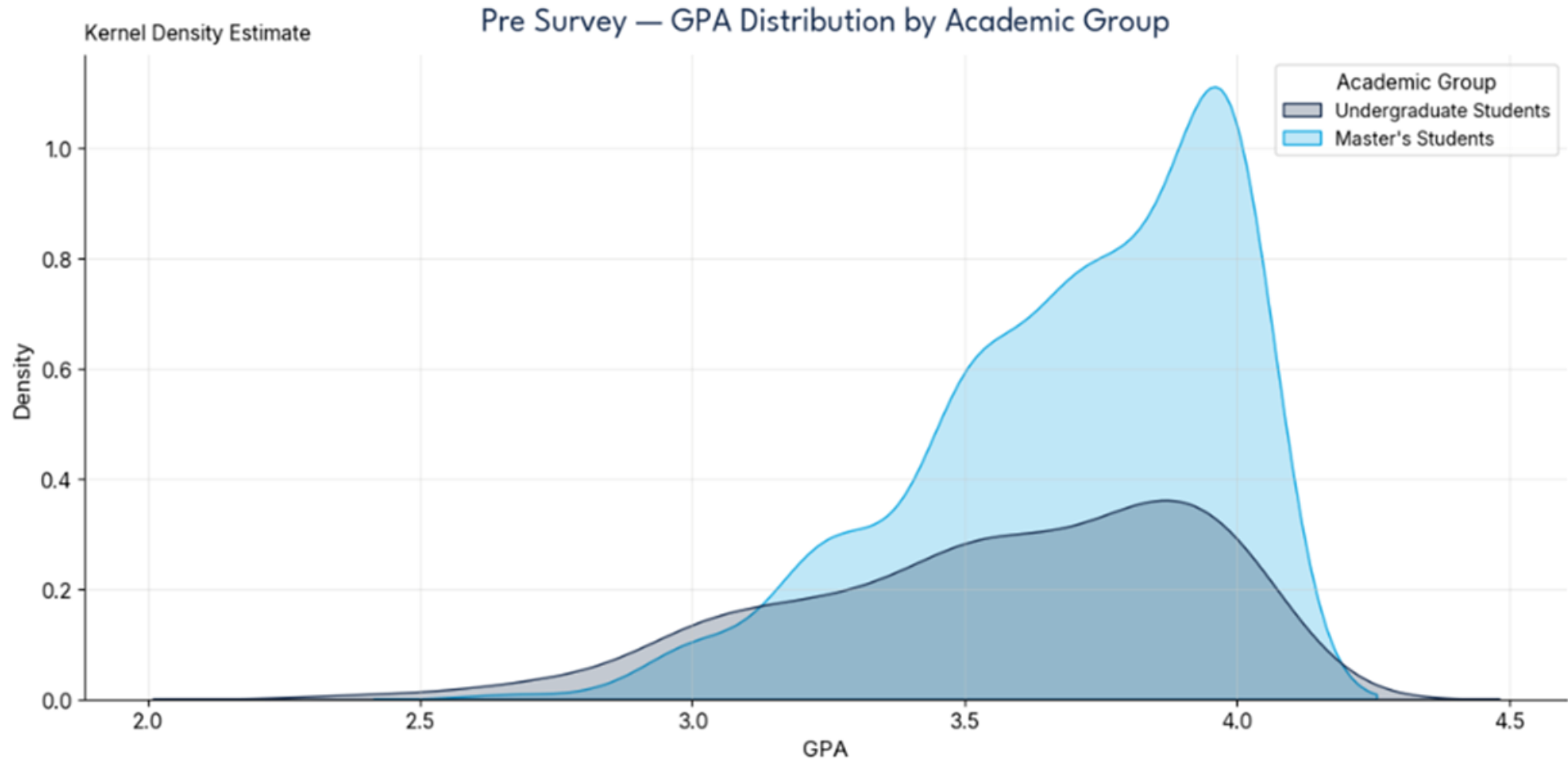
2025

- \$31,000 in prizes
- 96% passed AI-900
- 295 teams
- 1106 students
- 105 universities
- 15 non-US schools

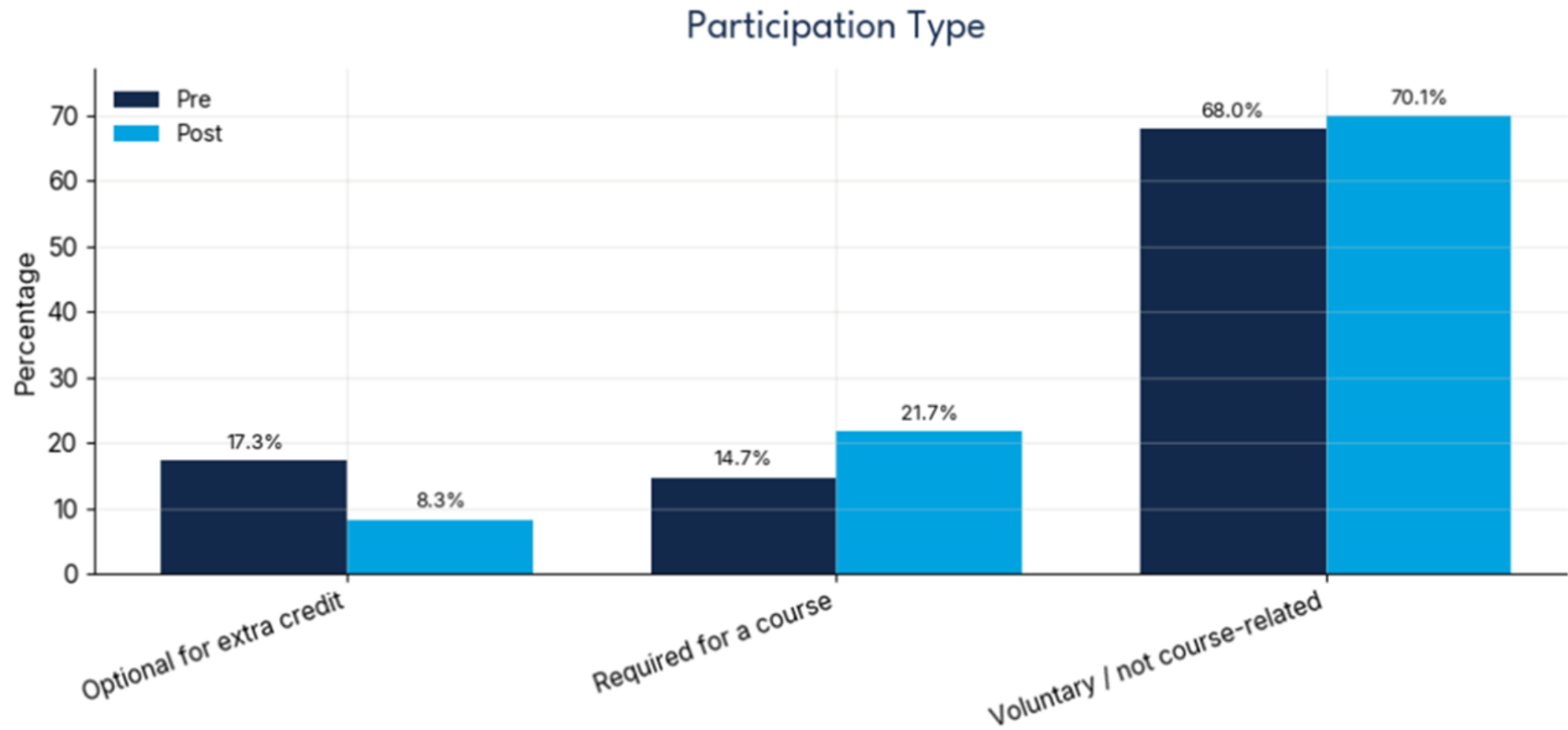
Strong turnout among masters' students



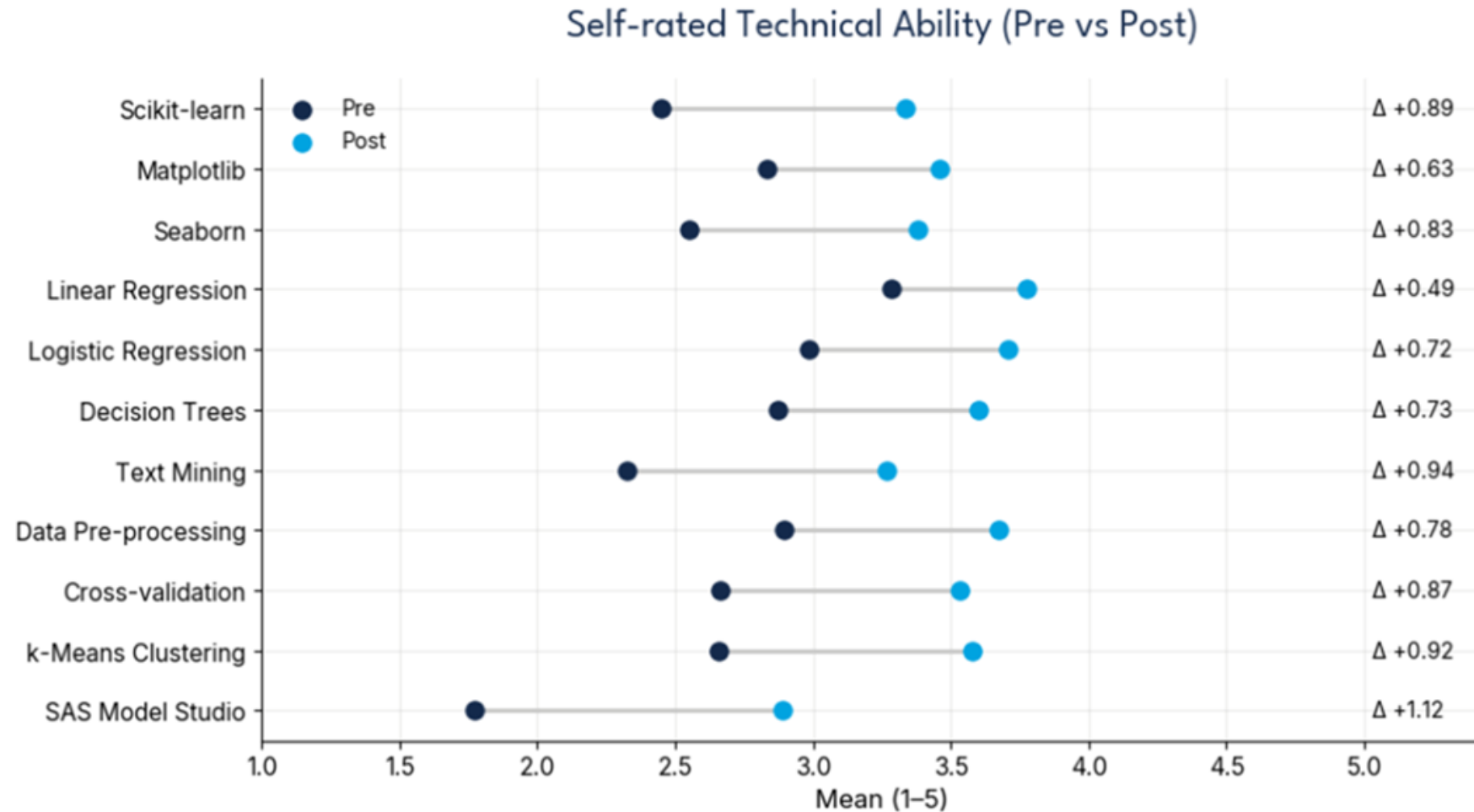
The competition is not just for the high performers



Most people continue to participate outside of class



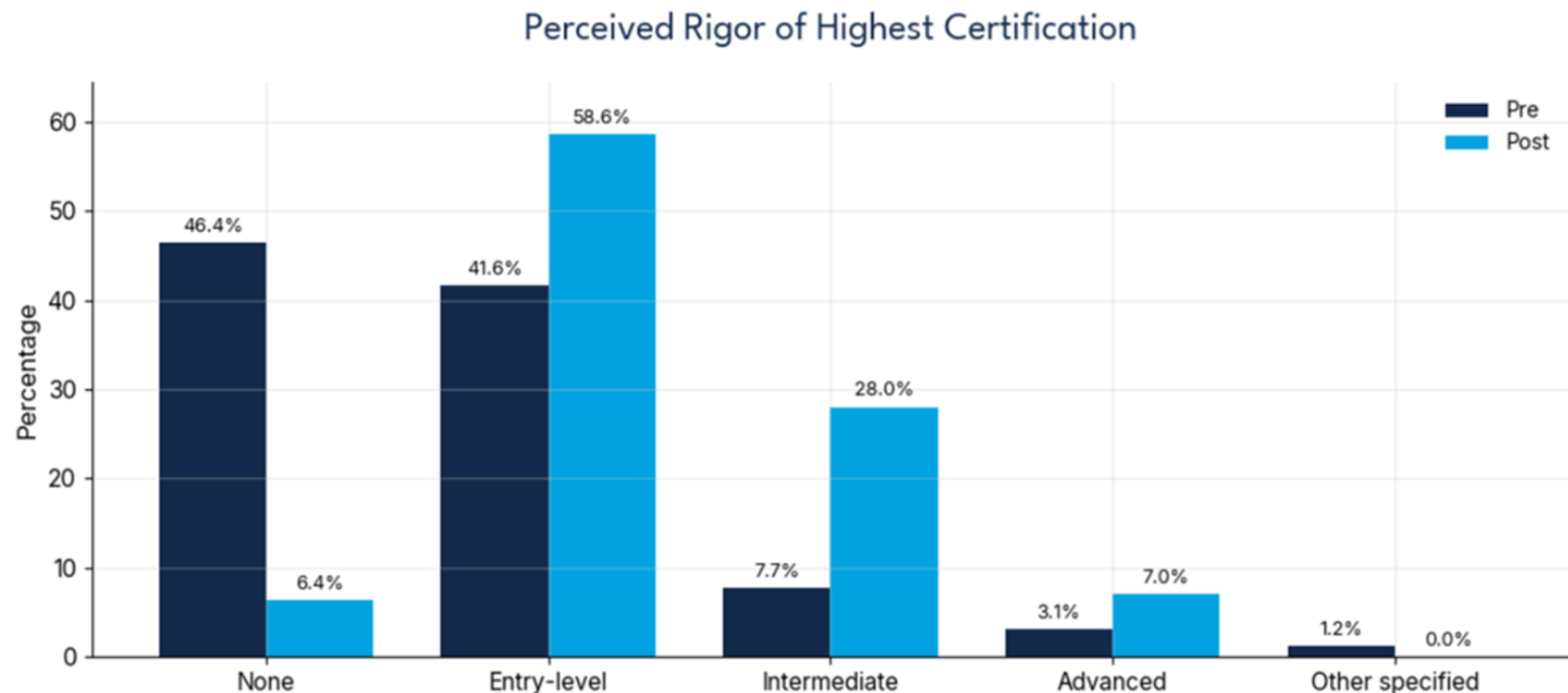
Student's perceptions of skills improved



Cronbach's α (skills battery) – Pre : 0.948

Cronbach's α (skills battery) – Post: 0.962

Participants are earning more certifications



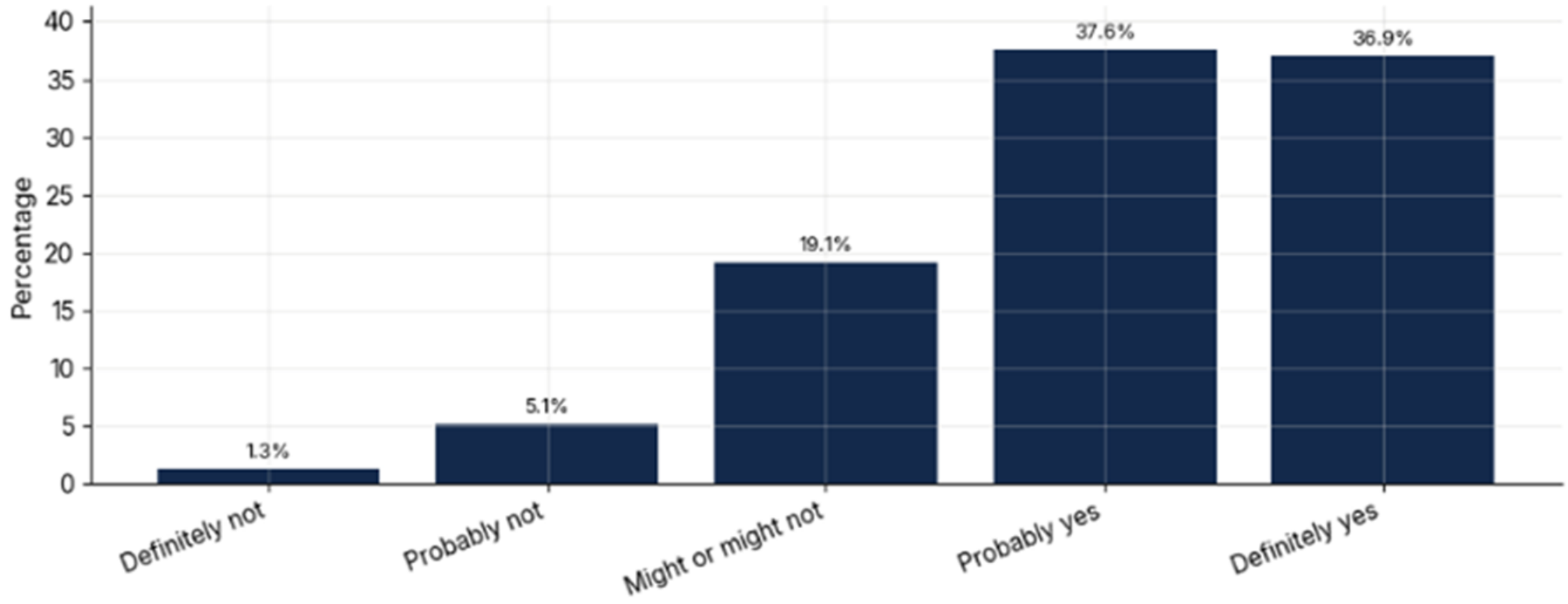
Note: AI-900 was anchored as an “Entry-level” certification for both pre- and post- questions

BUTLER

96% pass rate again on AI-900!



Do you believe you would have spent more time on this competition had an instructor at your university made the competition as a graded course component?



Everyone is a winner when they participate!

Region 3 – Undergraduate						
Index	Rank	Team Name	School Name	Total Points	AI-900 Training [Sunday, December 10th 2025]	Business Problem Framing [Sunday, November ...
91	1	Dawghouse9	Butler University	11565	750	750
87	2	ButlerBusiness5	Butler University	11382	750	750
97	3	Observatory8	Butler University	10427	750	750
90	4	Data Dawgs	Butler University	9665	750	750
94	5	Holcomb3	Butler University	9649	750	500
92	6	Esports14	Butler University	9599	750	750
83	7	BackTable	Butler University	9455	0	500
93	8	Hinkle10	Butler University	9349	750	750
96	9	Midtown1	Butler University	9282	750	750
130	10	jet2 holiday	Purdue University	9224	750	750
88	11	Colonnade7	Butler University	8999	750	750
89	12	Commons13	Butler University	8982	750	750
84	13	Butler Bias	Butler University	8732	750	750
85	14	Butler Blue	Butler University	8104	750	500
99	15	Traditions16	Butler University	7149	250	750
95	16	Invictus2	Butler University	6800	750	500

Rows: 49

Expand

My MS 365 Predictive Analytics course:

- ✓ 0 Business Analytics majors (all other undergraduate Business majors)
- ✓ 94% (50 / 53) passed AI-900 with average of 85%
- ✓ We were lowest on the predictive modeling case – but never missed points!

BUTLER

Every student/team could have their own poster...

Data Dawgs Data4Good Competition



Katie Mihelic, Luisa Hungria, Italy Lewis, Jinna Hyatt, Dr. Matthew Lanham (Advisor)
Butler University Lacy School of Business
kmihelic@butler.edu; lhungria@butler.edu; itlewis@butler.edu; jhyatt@butler.edu



ABSTRACT

This project is the result of the 2023 Data4Good Competition and aims to leverage data analytics and machine learning capabilities to solve a real-world problem that has significant positive impact on society. The purpose of this project is to derive valuable insights from the given dataset and build a model that can enable informed decision-making. The importance of this project is that it has the ability to make the solution more efficient, accurate, and effective with the use of data analytics. On the technical side, we used techniques such as data cleaning, analysis, feature development, and modeling with the use of Python and the DataCamp DataLab.

BUSINESS PROBLEM FRAMING

- The project addresses the problem of misinformation generated by large language models (LLMs) in educational settings. The central question is whether an AI-generated answer to a question is factual, contradictory, or irrelevant, given the question and supporting content.
- As AI tools are increasingly used by students, incorrect or irrelevant AI responses can mislead learners and undermine trust in educational technology. Accurately identifying unreliable AI-generated content is essential for responsible and safe use of LLMs in education.
- Primary stakeholders include educational institutions, students, educators, and developers of AI-powered learning tools who rely on accurate and trustworthy AI outputs.
- The project uses a labeled dataset of question-answer pairs and is constrained by data quality, class balance, and the need for interpretable and generalizable models. Performance is evaluated using a weighted confusion matrix that equally prioritizes all classes.
- The solution supports improved AI reliability, reduces the risk of misinformation, and enables safer integration of LLMs into educational platforms by flagging incorrect or irrelevant responses.

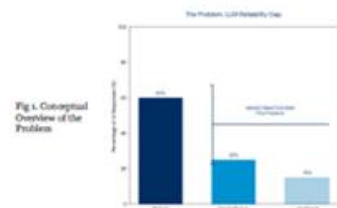


Fig. 1. Conceptual Overview of the Problem

Data4good
@Butler University

ANALYTICS PROBLEM FRAMING

- Problem Statement:** This is a multi-class classification problem. Given the question-answer pair, the goal is to classify the type of relationship between these into one of the predefined categories: "factual", "contradictory", or "irrelevant".
- Clear Assumptions:** The clear assumptions highlight that the data quality is representative, embedding models effectively capture semantic meaning, preprocessing enhances performance, features are sufficient for classification, and class imbalances is noted as an area for potential improvement.
- Success Metrics:**
 - Overall Accuracy: Giving a general measure of the model's effectiveness.
 - F1 Score (per class): Balanced measure of model's precision and recall.
 - Confusion Matrix: Breakdown of each model's strengths and weaknesses.
- Justification:** This analytical problem is justified by the critical need for robust models that can accurately classify nuanced text relationships in real-world applications, despite significant class imbalances.

DATA

Important Data Relationship:

- The "type" label is determined by collective semantic meaning and coherence derived from "question", "answer", and "content" fields.

Business Problem Framing Reflection:

- Addresses a critical business need to automate question-answer classification by framing it as a multi-class text classification problem, leveraging NLP and machine learning.

Feature	Priority	Description	Role
type	High (target variable)	Categorical label: factual, contradictory, or irrelevant.	Primary outcome variable to predict.
question	High (feature)	Text string representing the user's query.	Essential input for intent and context understanding.
answer	High (feature)	Text string containing the provided response.	Crucial for evaluating correctness/relevance against the question.
content	Medium (feature)	Text string with additional background information.	Provides deeper semantic understanding.

Table 1. Data Dictionary

METHODOLOGY



Fig. 2. Methodology

MODEL BUILDING & EXPERIMENTAL RESULTS

Rubric

- This table summarizes the performance of various predictive model experiments on different feature sets. It highlights models that generalize well to unseen data, shows where overfitting occurs, and provides insight into the relative effectiveness of embeddings, TF-IDF features, and hybrid approaches.

Features	Predictive Model	Train Accuracy	Test Accuracy
Content with generated question to a PCA	Logistic Regression	0.897	0.846
Content with generated question to a PCA	Decision Tree	0.888	0.787
AI-MiniLM-L6-8-embeddings-v2 (q, a, c) + word → PCA features → PCA for classification + Random Forest	E-Clustering	84.66%	84.66%
AI-MiniLM-L6-8-embeddings-v2 (q, a, c) + word → PCA features → PCA for classification + Random Forest	Random Forest	0.888	0.888
AI-MiniLM-L6-8-embeddings-v2 (q, a, c) + word → PCA features → PCA for classification + Random Forest	Neural Network	0.893	0.887
Hybrid TF-IDF + CharN-grams (q, a, c) + word → PCA features → PCA for classification + Random Forest	Naive Bayes Model	81.14%	71.42%
Hybrid TF-IDF + CharN-grams (q, a, c) + word → PCA features → PCA for classification + Random Forest	Support Vector Machine	81.14%	71.42%
Character-level TF-IDF (q, a, c) + word → PCA features → PCA for classification + Random Forest	Random Forest	0.893	0.887
Hybrid TF-IDF + CharN-grams (q, a, c) + word → PCA features → PCA for classification + Random Forest	Naive Bayes Classifier	0.893	0.887

- The Neural Network Model with GloVe embeddings has turned out to be the best model for this data set. This model helped to significantly improve the classification of minorities such as "contradiction" and "irrelevant" compared to other models.

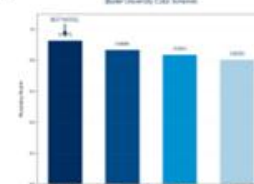


Fig. 3. Experimental Results

DEPLOYMENT & LIFECYCLE MANAGEMENT

- Our work acts like a filter for contradictions and irrelevant responses with a 92.7% accuracy. By isolating these factors, we are able to provide clear diagnostics to improve GenAI troubleshooting through fine-tuning.
- Our predictions show that content is essential. Analyzing the semantic relationship between questions and answers outperforms models that rely on text isolation.
- The solution serves as a real-time Application Programming Interface that flags regeneration requests when misinformation is detected within educational platforms.



Fig. 4. Possible Figure Demonstrating Potential Impact/Settings/Risk Reduction, etc.

KEY TAKE-AWAYS

What went well:

- Neural Networks with MiniLM embeddings → strong performance / good generalization.
- Logistic Regression and TF-IDF → stable and consistent.
- Character-level TF-IDF + Naive Bayes → surprisingly effective for simpler models.

What didn't go well/key considerations:

- Decision Trees → severe overfitting, especially with PCA + GloVe.
- K-Means → poor clustering (silhouette → 0).
- High-capacity models risk overfitting; PCA may limit learning of subtle patterns.
- Feature engineering is critical; naive hybrid approaches can hurt performance.
- MiniLM embeddings outperform GloVe for semantic tasks.

Competition Outcome

- Data Dawgs placed 26th in Region 3 in the Data for Good competition.
- An invalid Case Challenge file meant no official score was recorded.
- Failing reflects participation in other components, not Case Challenge performance.

BUTLER

Personal Development & Outcomes

- Became Microsoft AI-900 AI Fundamentals Certified.
- Completed 3 DataCamp courses on Python Programming, Scikit-learn, Natural Language Processing, and Cluster Analysis.
- Learned the INFORMS Business Problem Framing Course.
- Earned a SAS Badge on SQL Essentials Knowledge.
- Earned a SAS Badge on AI Foundations Knowledge.
- Developed a much greater understanding of Python and AI poster creation.



Student perceptions – “career readiness”

89%

believed this competition helped fill a knowledge, skill, or ability gap that they could showcase to employers

81%

said they would “probably” or “definitely” discuss this competition work in a future interview to highlight their analytics skills

Student perceptions – “process, process, process”

8%

have heard of the INFORMS CAP JTAs/IAF prior to this competition

80%

perceived knowledge of the INFORMS IAF was moderately to advanced

Note: 17% at beginning of competition

89%

plan on using the INFORMS CAP JTAs in the future when designing and delivering analytical solutions.

Note: 80% last year

Engagement with Business Problem Framing course

Status	Count
Complete!	145
Pending	186
(blank)	15
Grand Total	346



Student perceptions – “process, process, process”

89%

believed this competition was worth the time and money invested

89%

would recommend students to participate in the competition next year!



Survey



Matthew Lanham
Butler University

MAPD Data4Good Feedback



<https://www.datacamp.com/event/data4goodcompetition>

Group Session

Table 1: AI Integration & Academic Integrity

- *AI on exams, coding assignments, assessment redesign, and policies.*

Table 2: Co-curricular Experiences & Student Engagement

- *Beyond grades - building community, engagement strategies, student leadership, and events.*

Table 3: Program Differentiation Strategies

- *How to stand out in a crowded market, positioning, unique value propositions.*

Table 4: Assessment & Learning Measurement

- *How to measure learning in the AI era, program outcomes, rubric design, and grading consistency.*

Table 5: Program Operations

- *Staffing models, budget challenges, cross-functional coordination, and career paths for non-faculty roles.*

Table 6: Enrollment Strategies

- *Recruiting strategies, yield improvement, and international student visa navigation (entry and post-graduation).*

AI & Analytics Demo Showcase

Innovations in Experiential Learning with GenAI



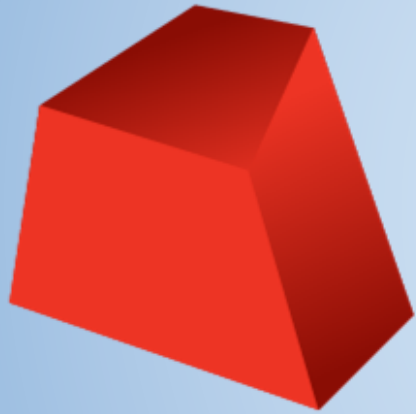
Scott Radcliffe
Emory University

AI-Powered Data Analysis



Stephen Hill
Samford University

Sponsor Presentation



GUROBI
OPTIMIZATION

Group Session

Table 1: AI Integration & Academic Integrity

- *AI on exams, coding assignments, assessment redesign, and policies.*

Table 2: Experiential Learning and Industry Partnership

- *Capstone management, sponsor recruitment, student team dynamics, corporate partnerships.*

Table 3: Program Differentiation Strategies

- *How to stand out in a crowded market, positioning, unique value propositions.*

Table 4: Assessment & Learning Measurement

- *How to measure learning in the AI era, program outcomes, rubric design, and grading consistency.*

Table 5: Program Operations

- *Staffing models, budget challenges, cross-functional coordination, and career paths for non-faculty roles.*

Table 6: Enrollment Strategies

- *Recruiting strategies, yield improvement, and international student visa navigation (entry and post-graduation).*

Panel: Career Readiness & Hiring Trends



Nicole Janeway
Data Strategy Professionals



Robbie Brusso
Amazon



Christopher Carlson
MANTECH

- **The Market Today:** Demand, Roles, and What AI Is Changing
- **What Employers Want:** Skills, AI Readiness, and Hiring Expectations
- **Looking Ahead:** Where the Opportunities Are and How to Prepare Students for Them



Lisa Dubler
Georgetown University



Diana Chávez
UC Berkeley