

We'll begin shortly. Students, please
fill out the survey while you wait!

2025 Crossroads Classic Analytics Challenge

Case Presentation



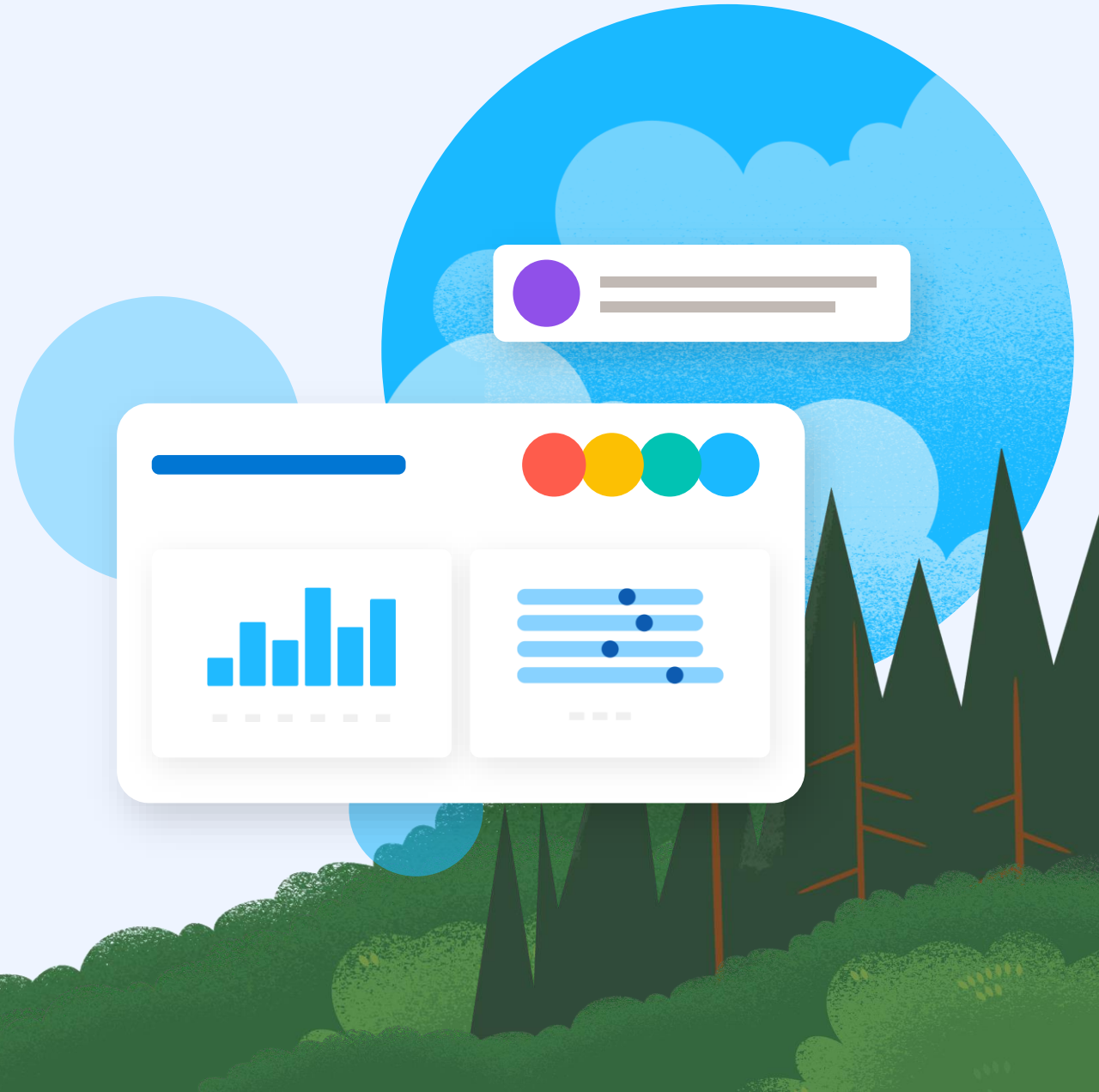
Pre-Competition Survey



Academic Programs

Closing the data skills gap with free software and learning resources for students and instructors.

Jessi Lyons, Sr. Program Manager





Jessica Lyons

Culturally Responsive Educator,
Inspiring Story-Teller, Strategic Thi...





3 Million +
students and instructors

**The world's most
valuable resource is
no longer oil, but
data...**

**The
Economist**





“Data skills have risen in importance over the past five years and the trend isn’t likely to stop anytime soon. Surveyed **recruiters rank data literacy as the skill highest in demand for entry-level candidates today”**

Tableau commissioned research study by Forrester Consulting



Why Tableau?



Community	Vibrant Community: Huge community of passionate users that is 100% dedicated to analytics.
Visualization Capability	Unlimited Visualization Capability: VizQL allows customers to precisely build vizzes for what they need for both analysis and for sharing information.
Data Connections	Open Approach to Data Connection: Live connections to over 100 data sources, without sacrificing product functionality.
Data Preparation	True Data Preparation: Data prep provides an intuitive visual means of ensuring users have clean data. (learn more)
Calculations	Easy to Use Calculations: Simple, Excel-based calculations, including many Quick Table calcs.

- **Connect to almost any data (esp. AWS)**
- **Fast direct connections, fast in-memory**
- **Ease of use/rapid adoption times**
- **Speed of deployment**
- **Pace of innovation**
- **Enterprise governance, security and compliance (Kerberos, AD, etc.)**
- **A leader in the Gartner Magic Quadrant**
- **The leader in visual analytics**



We help people see and understand data

Special thanks to our Tableau Experts!



John Barnes

Salesforce
Principal Solution Engineer



Rain Ortega

Salesforce
Associate Program Manager



Rajnish Bhatnagar

Salesforce
Senior Manager, Engineering
Manager - Software



Samuel Epley

Salesforce
Lead, Account SE



Margot Tejera

Salesforce
Senior Account Solution Engineer



Join our Tableau Workshops

Tableau HQ

Fostering Data Brilliance Joined

Welcome to our vibrant Teaching and Learning Community, where academia and industry leaders come together to nurture the next generation of data-savvy trailblazers.

This group is hosted by our Tableau Community Academic team, regularly featuring speakers from academia and diverse industries. We share tools and best practices to foster data brilliance. Together, we break barriers, connect academia and industry leaders, and create exciting learning opportunities that equip future leaders with essential data skills.

Whether you're an experienced academic or an industry professional, this group is your hub for innovation and inspiration.

We are not just educators; we are curious architects, collaboratively shaping the learning landscape. Join us on this journey to empower leaders who thrive in tomorrow's data-driven world!



Share

Upcoming events



Feb 9, 2024 Virtual Event

Introduction to Tableau with Margot Tejera

Share

Objective: Provide students with a foundational understanding of Tableau, covering basics such as data connections, visualization creation, and simple analysis technique

View details



Feb 16, 2024 Virtual Event

Intermediate Tableau Workshop with John Barnes

Share

Dive deeper into Tableau functionalities, exploring advanced visualization techniques, calculated fields, and more complex data analysis. Prep you data with Tableau Prep

View details



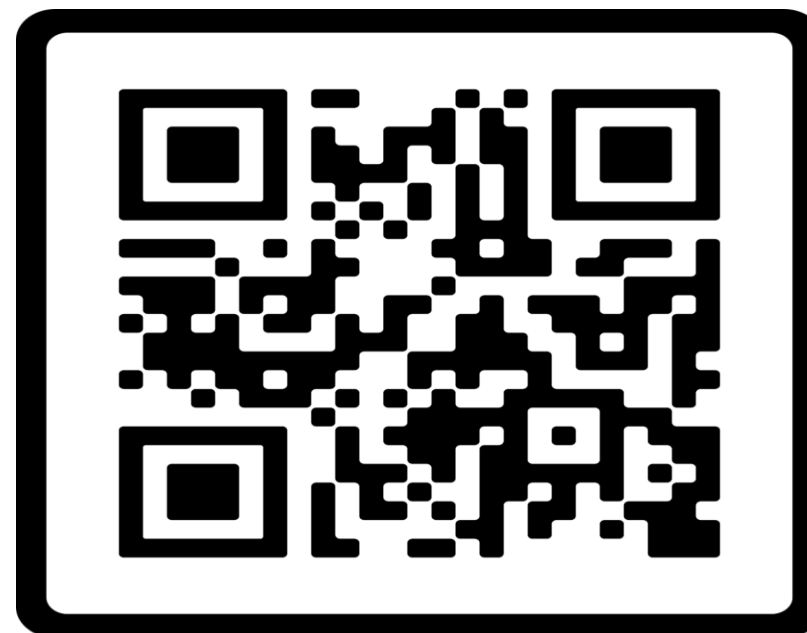
Feb 23, 2024 Virtual Event

Creating Dynamic Dashboards for StoryTelling with John Barnes

Share

Focus on designing interactive and dynamic dashboards, guiding students on how to effectively communicate insights through their visualizations.

View details



Fostering Data Brilliance

Benefits



Full-time students 16 years and older

- Tableau Desktop
- Tableau Prep
- eLearning
- 20% off Tableau Desktop Specialist exam
- Usage is not restricted - students can use their license for internships, work, and research projects
- **Renewable**

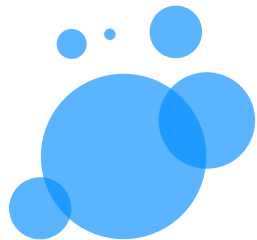
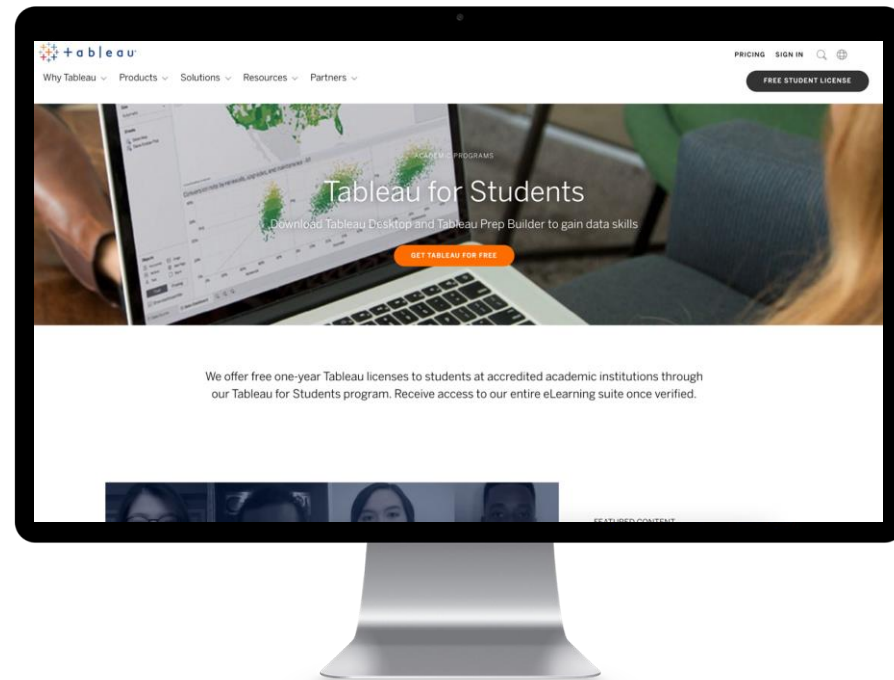




Tableau Desktop



It goes beyond free software

Resources and support beyond licenses

The Tableau Student Guide: a simple site that gives Tableau newbies^{🦋🦋} and students a one-stop-shop in starting with Tableau

www.thetableaustudentguide.com

Community projects: Makeover Monday & Back 2 Viz Basics

www.makeovermonday.co.uk & www.thetableaustudentguide.com/vizbasics

Tableau for Students Summer Camp: On-demand & live each summer

www.tableau.com/learn/series/student-summer-camp



Tableau Student Ambassadors

Student Ambassadors are Tableau champions in higher education, empowering, and inspiring others to acquire fundamental skills.



8M+

TABLEAU PUBLIC
VISUALIZATIONS
AND DASHBOARDS
TO INSPIRE YOU

400k+

TABLEAU FORUMS
USERS ANSWERING
QUESTIONS TO
SKILL YOU UP

500+

COMMUNITY BLOGS
TO INSPIRE YOU AND
HELP ADVANCE YOUR
DATA JOURNEY

500+

USER GROUPS FOR
VIRTUAL + LOCAL
LEARNING AND
CONNECTION

2.5M+

STUDENTS +
TEACHERS
EMPOWERED WITH
FREE SOFTWARE
AND DATA SKILLS

welcome to the *DataFam*



Diego Parker
Tableau Visionary



Kimly Scott
Tableau Visionary



Alice McKnight
Tableau Social Ambassador



Josh Jay

NCAA Director of Business Analytics



Mission

Provide a world-class athletics and academic experience for student-athletes that fosters lifelong well-being.

NCAA Overview

Three Divisions

1100+ Member Institutions

500K+ Student-Athletes

91 Championships

25 Sports

NCAA Priorities





*"Another massive investment opportunity Baker stressed is the **fan database** that was announced at the 2024 Convention. More than 13 million fans are now in the database. Additionally, Baker announced that the national office will roll out an extensive data-sharing initiative with NCAA members in 2025."*

NCAA President Charlie Baker highlights modernization and growth in 2025 State of College Sports address

NCAA Priorities



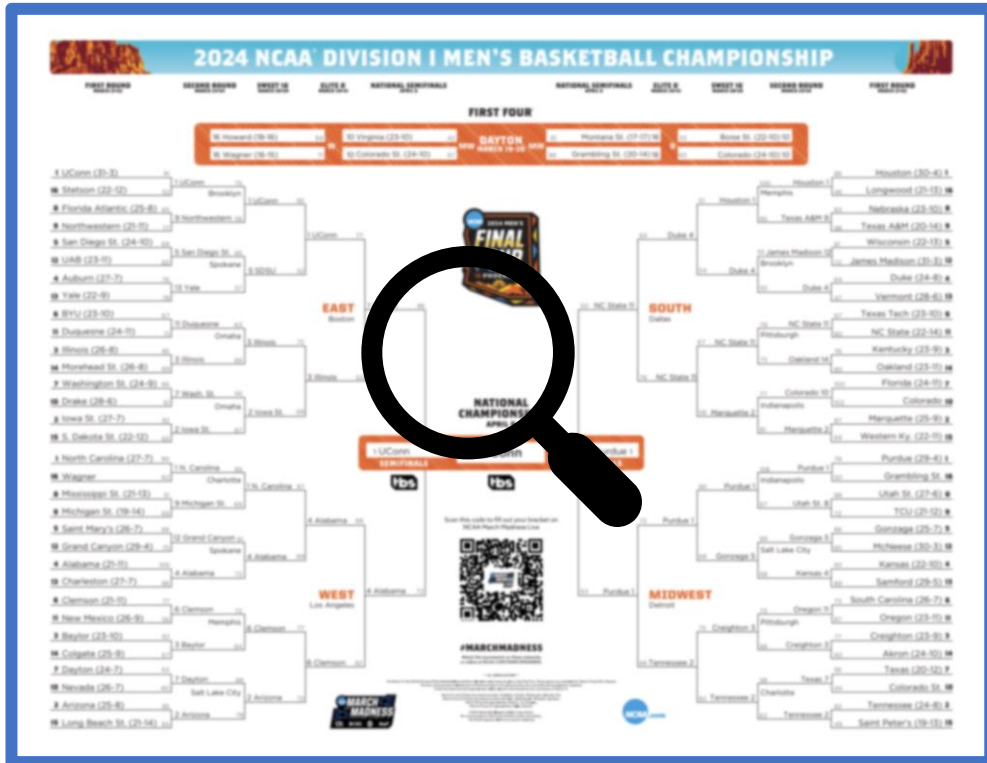
Grow the college sports ecosystem

- Inspire the next generation of athletes and up-and-coming sports.
- Enable quality access and viewing for all who want it.
- **Use data to engage fans** with highly personalized experiences and products.

Deliver sustainable funding for the NCAA mission

- **Excite fans** fandom through compelling entertainment products and services.
- **Grow media, sponsorship and ticketing revenue.**
- Innovate new revenue streams.
- Set a culture of cost discipline.

Bracket



<https://www.ncaa.com/brackets/print/basketball-men/d1/2024>

How to Play the Bracket Challenge



<https://www.youtube.com/watch?v=o0zeyzi0OQY>

Competition Data Sets



Institutions

- List of 68 NCAA Division I Member Institutions selected to compete in the 2024 NCAA Division I Men's Basketball Championship

Entries

- A list of Bracket Challenge entries for the 2024 NCAA Division I Men's Basketball Championship
- One user can submit multiple entries predicting the outcome of the championship
- There are 144,447 entries in this data set where:
 - The entry was completed and submitted
 - We have a known Zip Code for the customer from our Fan Database
 - The customer is from the United States
 - The customer is neither a member of an NCAA institution nor an NCAA staff member

Data Set: Institutions



Column Name	Sample	Description
InstitutionID	463	The unique identifier given to a member institution by the NCAA
InstitutionName	Nebraska	The name of the member institution
InstitutionNickname	Cornhuskers	The nickname of the member institution
InstitutionAbbreviation	NEB	The abbreviation of the member institution
InstitutionCity	Lincoln	The city where the member institution is located
InstitutionState	NE	The state where the member institution is located
InstitutionPostalCode	68588	The postal code where the member institution is located
InstitutionDMACode	722	The designated market area (DMA) code. Used to group locations into common media offerings. See https://en.wikipedia.org/wiki/Media_market
InstitutionDMADescription	LINCOLN & HSTNGS - KRNY	The description of the designated market area (DMA)
InstitutionLatitude	40.8176	The latitudinal coordinate identifying the location of the member institution
InstitutionLongitude	-96.70051	The longitudinal coordinate identifying the location of the member institution
InstitutionConference	Big Ten Conference	The name of the conference the member institution belonged to in the Academic Year 2023-2024
InstitutionEnrollment_Male	9016	The number of male students enrolled at the member institutions in the Academic Year 2023-2024
InstitutionEnrollment_Female	9159	The number of female students enrolled at the member institutions in the Academic Year 2023-2024
InstitutionEnrollment_Total	18175	The number of total students enrolled at the member institutions in the Academic Year 2023-2024
InstitutionNCAAMemberSinceDate	9/1/1906	The date the member institution joined the NCAA
RegularSeasonWins	23	The number of regular season wins for the member institution's men's basketball team
RegularSeasonLosses	10	The number of regular season losses for the member institution's men's basketball team
RegularSeasonAverageAttendance	13178.58	The average attendance of regular season games for the member institution's men's basketball team
RegularSeasonAverageScore	77.58	The average score of regular season games for the member institution's men's basketball team

Data Set: Entries



Column Name	Sample		Description
CustomerID	27265		A randomly assigned integer identifying a unique customer by email address
CustomerAreaCode	620		When available, the area code of the customer's phone number
CustomerPostalCode	66763		The postal code of the customer's address
CustomerPostalCodeLatitude	37.4466		The latitudinal coordinate identifying the location of the customer's postal code
CustomerPostalCodeLongitude	-94.6916		The longitudinal coordinate identifying the location of the customer's postal code
CustomerDMACode	603		The designated market area (DMA) code. Used to group locations into common media offerings. See https://en.wikipedia.org/wiki/Media_market
CustomerDMADescription	JOPLIN - PITTSBURG		The description of the designated market area (DMA)
NCAACustomerRecordCreated	3/26/2012		The date this customer first showed up in NCAA's database
BracketEntryId	2707171		The unique identifier of the bracket entry
BracketEntryCreatedDate	3/20/24 17:21		The date and time the bracket was created
RegionWinner_East	164	UConn	The InstitutionID of the team the customer selected to win the East Region of the 2024 Division I Men's Basketball Championship
RegionWinner_West	29	Arizona	The InstitutionID of the team the customer selected to win the West Region of the 2024 Division I Men's Basketball Championship
RegionWinner_South	288	Houston	The InstitutionID of the team the customer selected to win the South Region of the 2024 Division I Men's Basketball Championship
RegionWinner_Midwest	559	Purdue	The InstitutionID of the team the customer selected to win the Midwest Region of the 2024 Division I Men's Basketball Championship
SemifinalWinner_East_West	164	UConn	The InstitutionID of the team the customer selected to win the Semifinal game of the East/West Region of the 2024 Division I Men's Basketball Championship
SemifinalWinner_South_Midwest	288	Houston	The InstitutionID of the team the customer selected to win the Semifinal game of the South/Midwest of the 2024 Division I Men's Basketball Championship
NationalChampion	288	Houston	The InstitutionID of the team the customer selected to win the Final game of the 2024 Division I Men's Basketball Championship

Crossroads Analytics Challenge '25

Competition
Process



BUTLER

LACY SCHOOL
of BUSINESS

What's Next?

- You're registered for the competition and Pitch; what's next?
 - Once every member of your team has signed the NDA, you will receive an invitation to join the competition on Kaggle
 - Prior to forming a Kaggle team, make sure every team member is registered with Kaggle.
 - One team member will create a team and all others will join the team

<https://www.kaggle.com/code/alexisbcook/getting-started-with-kaggle-competitions>

Data on Kaggle

Crossroads Classic Analytics Challenge 25

<https://crossroadsclassicanalyticschallenge.com/>



[Settings](#) [Overview](#) [Data](#) [Discussion](#) [Leaderboard](#) [Rules](#)



Your competition is ready to launch! You've completed 11 of 11 tasks to launch your competition.

[Launch Checklist](#)



Dataset Description

[Edit](#)

The training set includes examples, including the three targets. The test set contains the datapoints without targets that must be estimated and submitted to kaggle. All entries in the test set must be estimated and submitted. A template, including bracket IDs is included, but this can be generated in code and submitted as long as all columns and bracket IDs are included. The bracket IDs in the submission template match the entries of the test set.

Files

- **bracket_train.csv** - the training set
- **bracket_test.csv** - the test set
- **submission_template.csv** - a submission template file in the correct format, including the necessary bracket IDs that must be estimated and column names for each of the three targets
- **CCAC 2025 - Institutions.csv** - a list of schools and associated school IDs
- **CCAC 2025 - Data Dictionary.xlsx** - a data dictionary
- **Division I Women's Basketball Contests.csv** - a list of D1 women's basketball contests and results

Files

6 files

Size

84.16 MB

Type

csv, xlsx

License

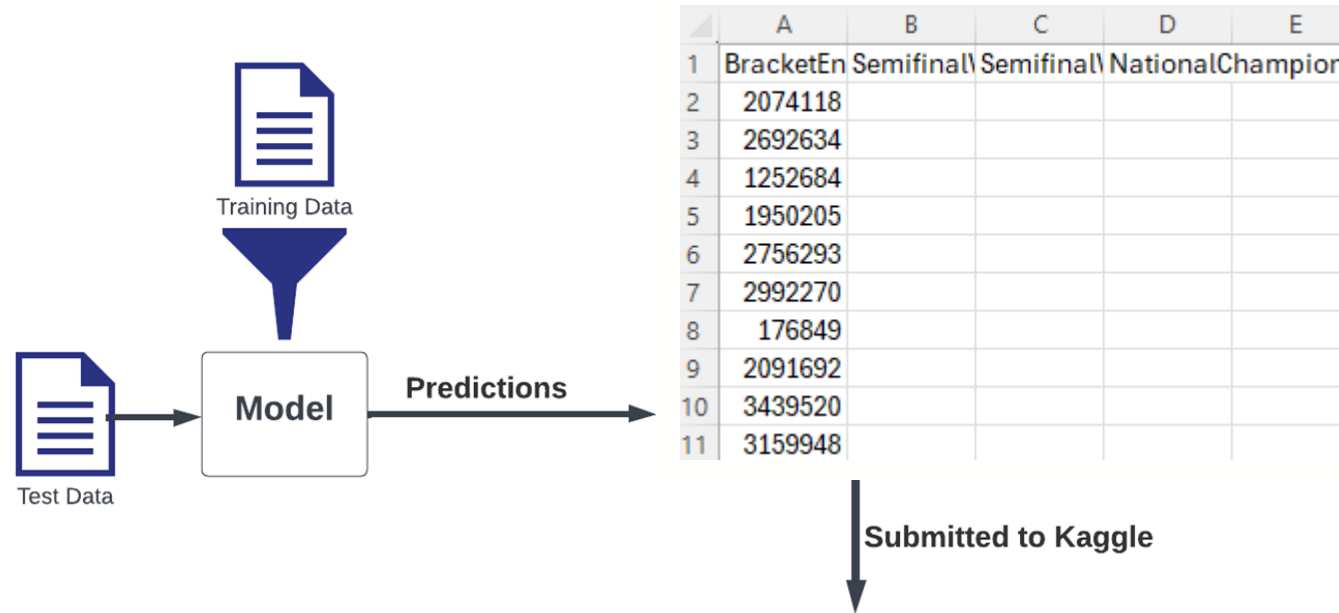
[Subject to Competition Rules](#)



BUTLER

LACY SCHOOL
of BUSINESS

Kaggle Process



Overview	Data	Code	Models	Discussion	Leaderboard	Rules	Team	Submissions	Host
----------	------	------	--------	------------	-------------	-------	------	-------------	------

Leaderboard

Raw Data

Search leaderboard

Public Private

The private leaderboard is calculated with approximately 50% of the test data.
This competition has completed. This leaderboard reflects the final standings.

#	Team	Members	Score	Entries
1	The Miner's League		0.80953	10
2	The Data Detectives		0.80843	12
3	Abnormal Distribution		0.80778	10

Predictive Analytics Seminar

- <https://butleru.zoom.us/j/98589600194>
- 90-minute tutorial on supervised learning with SKLearn in Google Colab
- 2/7/2025, 1200PM - 130PM

Tableau – Storytelling with Data

- Data analytics is more than just predictive modeling. Using visualizations to tell the story of your data is a key skill.
 - Each group will use any desired platform to create visualizations that describe the data and support the decisions made in model design.
 - The dashboards are to be included in the 15 minute presentation at the semi final and final rounds.



BUTLER

LACY SCHOOL
of BUSINESS

Round 1 -> Finals

- Every team will submit a 15-minute video to their university representative by 2/26
- Technical aspects of the predictive model and the dashboard
- Each participating university will choose its top undergraduate and top graduate team
 - The decision will be based on
 - Final standings on the leaderboard
 - Quality of Tableau dashboard
 - Overall presentation of the video



BUTLER

LACY SCHOOL
of BUSINESS

2025 CCAC Judging Rubric

Criteria	Mastery = 4	Proficiency = 3	Developing = 2	Beginning = 1	Score (4 max)
Phase I: Kaggle presentation video (50%)					
Analytics Problem Framing	1.Problem framed into an analytics problem 2.Assumptions are clear 3.Appropriate success metrics defined 4.Justification or approval of approach clear	One task lacking	Two tasks lacking	Three or more tasks lacking	
Data	1.Data sources identified and prioritized 2.Data pre-preprocessing clear 3.Important or notable data relationships clear 4.Reflection of business & analytics problem framing	One task lacking	Two tasks lacking	Three or more tasks lacking	
Methodology (Approach) Selection	1.Methods used are appropriate and clear 2.Software and technologies used are clear 3.Experiments performed are appropriate to support problem and answer Qs	One task lacking	Two tasks lacking	Three or more tasks lacking	
Model Building	1.Model results clearly and appropriately evaluated 2.Demonstrated how models will/are to be used 3.Final model/solution structures or interpretations discussed as necessary 4.Areas for improvement identified	One task lacking	Two tasks lacking	Three or more tasks lacking	
Phase II: Invited on-site final presentations (50%)					
Business Problem Framing	1.Problem & questions clearly defined 2.Topic importance/motivation clear 3.Audience/stakeholder(s) addressed 4.Context or constraints clear 5.Defined set of potential business/problem benefits	One task lacking	Two tasks lacking	Three or more tasks lacking	
Deployment & Life Cycle Management	1.Business validation of model/solution demonstrated 2.Impact (actual or estimated) of using model/solution 3.How solution could be productionized for future use (or a demo of a tool) 4.Future scope aligns with conclusions	One task lacking	Two tasks lacking	Three or more tasks lacking	
Presentation	1.Story was engaging and in a coherent order 2.Basis for conclusions were clear 3.Presentation is visually attractive with effective visual aids (e.g., Tableau) 4.Good volume and energy; proper pace and diction 5.Professional appearance and demeanor of speakers 6.Presentation completed within specified time window	One task lacking	Two tasks lacking	Three or more tasks lacking	
Total Score (out of 28) =					



BUTLER

LACY SCHOOL
of BUSINESS

Final Presentations

- The top graduate and undergraduate teams will be invited to compete in the finals of the competition on 3/7/2025.
- Each team will present their solutions to the NCAA case including predictive model and dashboard visualizations.

FAQs

- How many submissions per day?
 - 5 per day
- Where can we store the data?
 - Cloud storage ok, cloud services not ok
 - Cloud storage: google drive
 - Cloud services: Chat GPT/Claude/Llama/Deepseek
- Can we use an LLM?
 - Yes, only if it is localized. The NDA prevents the usage of the data with any public LLM
 - Disclaimer: Technical judging of the models will include explainability/traceability
- Can our dashboards be published to Tableau public?
 - No. Must use native Tableau desktop (Tableau public is a cloud service)



BUTLER

LACY SCHOOL
of BUSINESS