

Multidisciplinary Data Science (MDaS)

**To Better Prepare STEM Students with
Emerging Data Science Skills**

A National Science Foundation S-STEM
Scholarship Program

Meet the Project Team

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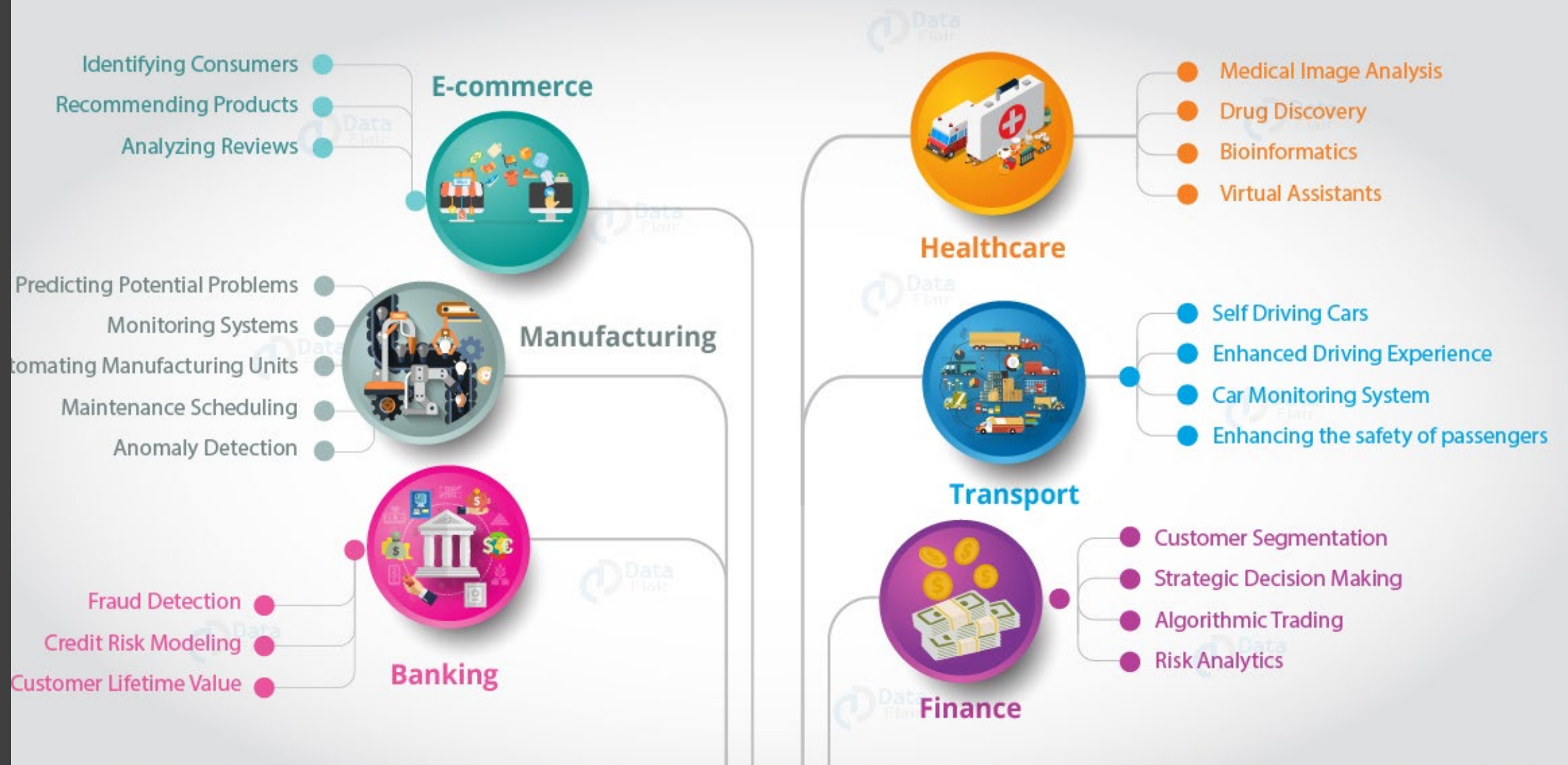
What is data science?

- Data is everywhere! Data science starts with data!
- Data science combines the fields of computer science, mathematics, statistics, and information systems with a focus on the generation, organization, modeling, and use of data to make scientific and business decisions.

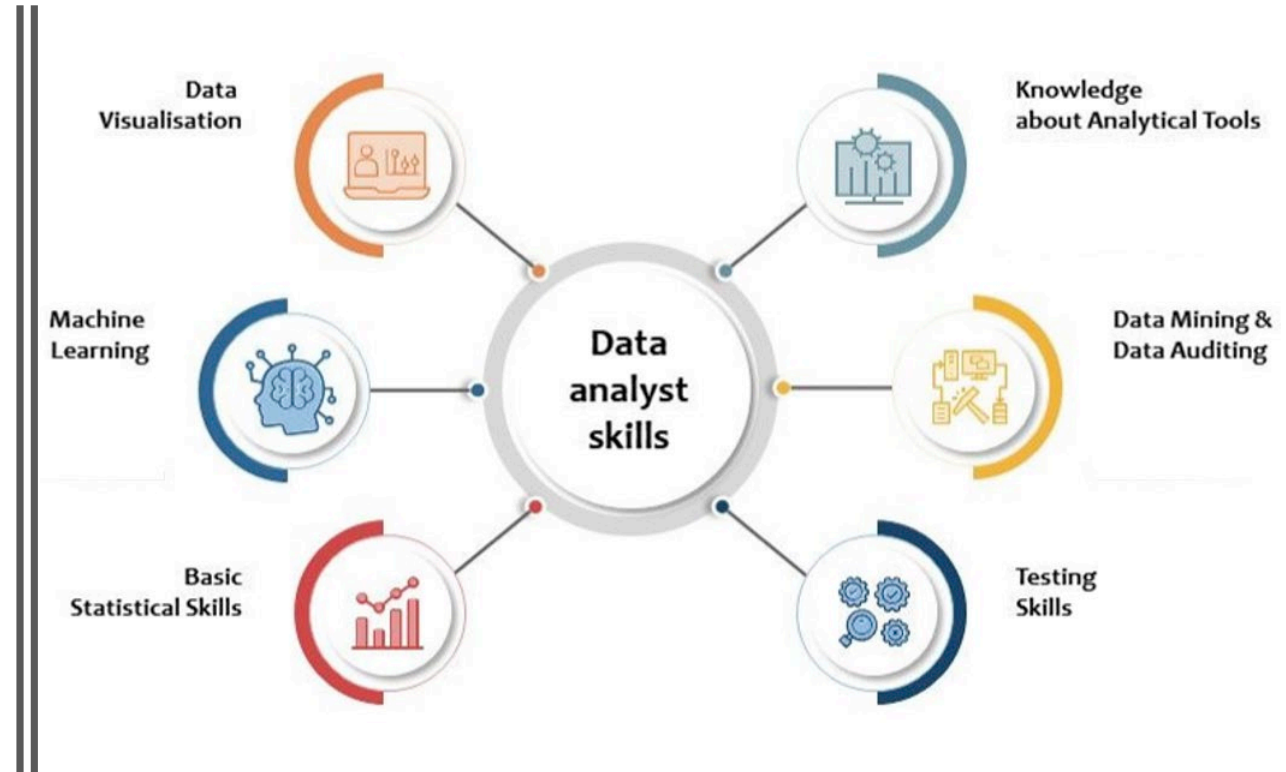


What do data scientists do?

- A data scientist is a person that has expert knowledge for turning observations into decisions.
- A data scientist devotes time to collecting data and answering questions of interest based on analyzing data.
 - Data scientists think about the physical processes and man-made systems that generate data and how to extract and organize the data in order to get answers.
 - Data scientists make the connection between observation and decision making by applying analytics to the data.
 - Data scientists observe and describe what happened, predict what might happen, and prescribe solutions for what to do.



Data Science Applications



Essential Skills for Data Analysts

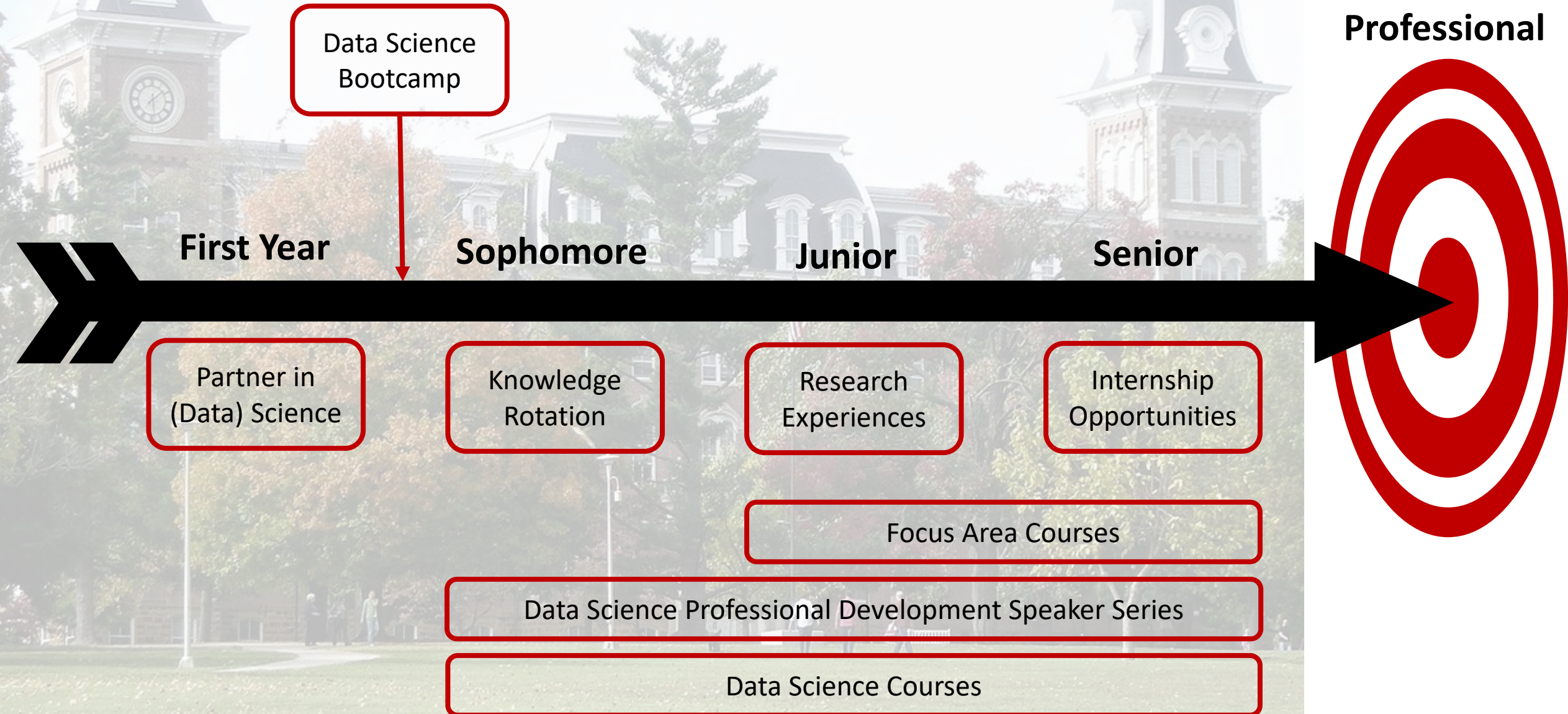
Why is MDaS Needed?

- To meet the growing workforce needs of qualified STEM graduates with data science skills in Arkansas and the nation.
- This will be accomplished by:
 - Establishing recruitment and retention programs for new data science majors and other related STEM disciplines
 - Faculty and business leaders mentoring students interested in data science
 - Engaging data science and other related STEM disciplines in career development initiatives leading to skills sought after within industry
 - Improving the graduation rate of data science students through need-based and academically accountable scholarships



What are the components of MDaS?

**Data
Science
Professional**



What is the Data Science Bootcamp?

- Workshops on data science topics in Fall and Spring semesters
 - Introduction to Data Science
 - The Role of Databases, Data Extraction and Transformation within Data Science
 - Python and R within Data Science
 - Regression Analysis within Data Science
 - Classification Methods within Data Science
 - Cluster Analysis within Data Science
- Topics covered:
 - Academic foundation of data science
 - Research activities and career opportunities



Who is eligible to apply?

- Students must be interested in data science as a career path or in the use of data science techniques within their career.
- Students must meet the following criteria to receive an MDaS renewable scholarship:
 - 1) must be a US citizen, permanent resident, national or refugee eligible to receive NSF funds;
 - 2) must be making satisfactory progress toward degree completion in a STEM-related field, and be in their first or second year; and
 - 3) must have a demonstrated financial need, as determined through FAFSA submission
- Final selection will be based on the quality of the application package, cumulative GPA (at least 2.75) and an interview.

How do students apply?

- Submit your application via the application link available at mdas.uark.edu.
- Applications can be submitted starting January 1 thru February 15, 2021. You will need the following:
 - One letter of recommendation (optional). Preferably from a current UA faculty member.
 - A current academic résumé
 - An essay (approximately one page; there are no style requirements). Your essay should be about:
 - 1) Why you want to participate in the MDaS program, 2) your short and long-range goals for your career, and 3) what data science means to you and how it will help you to advance your career goals.

What is expected from the students?

- Successfully complete 30 credit hours during the year with a minimum of 6 credit hour of data science related course hours per year;
- Meet the GPA renewal requirements (cumulative GPA ≥ 3.00);
- Apply for all available scholarships and aid;
- Submit the FAFSA form yearly; and
- Be an active participant in a minimum number of MDaS activities. MDaS students must remain enrolled full-time and make substantial progress towards their BS STEM degree.
- Complete required MDaS forms and paperwork in a timely manner
- Students are required to meet the highest standards of academic integrity and student conduct. Students found in violation of the academic integrity and/or behavior standards stated within the Code of Student Conduct can be removed from MDaS at the sole discretion of the project team.



For more information, contact

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- Acknowledgement:
 - This material is based upon work supported by the National Science Foundation under Grant No. 1930532. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.