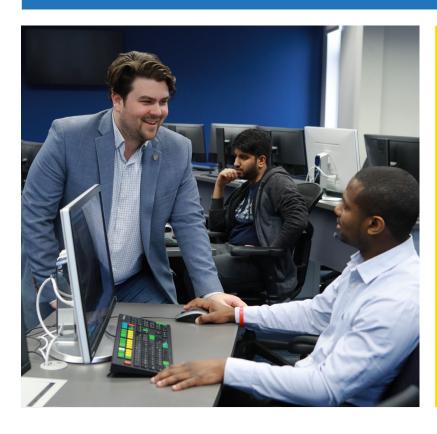## HOW TO USE THIS MAP

- UToledo's Major Map is a guide for you to plan for future success while you explore your University experience. The five rows of the map provide a step-by-step guide to integrate your academic courses with experiences on and off-campus that will help build your career readiness.
- Start thinking about life beyond college now and use the map to set short- and long-term goals, such as preparing for graduate or professional schools, preparing for your first career-track job and networking with others in your profession.

RESOURCES FOR SUPPORT

From orientation to graduation, there are many resources to support your University experience.

Your success coach is like your personal GPS. As you navigate from where you are to where you want to be, coaches offer one-on-one guidance and support through referrals to academic support services and other campus resources, and connections to campus engagement and experiential learning opportunities. Visit utoledo.edu/successcoach to connect with your success coach.

Career Services provides comprehensive career planning and preparation services for all UToledo students in order to clarify and implement their academic and career goals. Connect with Career Services during your first year and continue working with them often throughout your academic career. Visit utoledo.edu/career to learn more about the programs, services and events to support your success.

BUILD YOUR EXPERIENCE BEYOND THE CLASSROOM

By engaging in high-impact experiences beyond the classroom you can help yourself stand out as you begin your career.
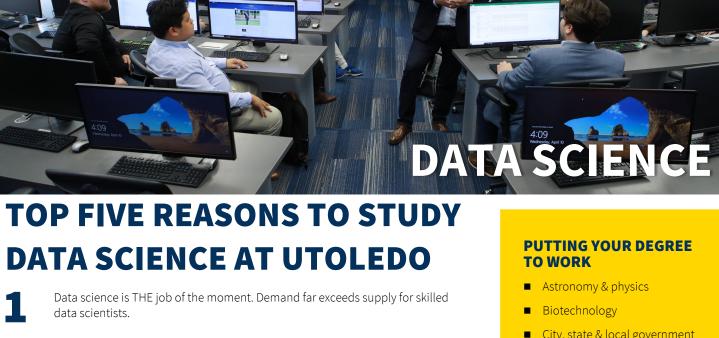
UToledo data science students complete an integrated capstone course senior year. You'll apply your knowledge of advanced data science concepts, building sophisticated databases, engineering and visualization of large data sets, and more, to data in your chosen field of concentration.

Talk with your academic advisor or a faculty mentor to learn about how you can immerse yourself in experiences that will challenge you, provide meaningful interaction with faculty and peers and actively engage in the material you're learning.

COLLEGE OF NATURAL SCIENCES AND MATHEMATICS
Data Science Interdisciplinary Degree Program
Main Campus, Wolfe Hall, Room 2246
419.530.7845
NSMAdvising@utoledo.edu
utoledo.edu/nsm/bs-data-science

THE UNIVERSITY OF TOLEDO

FUELING TOMORROWS

DATA SCIENCE

TOP FIVE REASONS TO STUDY DATA SCIENCE AT UTOLEDO

1 Data science is THE job of the moment. Demand far exceeds supply for skilled data scientists.

2 Work directly with outstanding faculty from a wide variety of disciplines.

3 Learn computer code, create multi-source reports, use data to make informed decisions and gain software skills needed for science, business and other data fields.

4 Choose an area of concentration and have the opportunity to apply your skills in an area of interest to you.

5 Emphasis on experiential learning through hands-on research, as early as your first year.

PUTTING YOUR DEGREE TO WORK

- Astronomy & physics
- Biotechnology
- City, state & local government
- Consulting services
- Energy
- Engineering
- Environmental sciences
- Finance & financial
- Healthcare & public health
- Pharmaceutical
- Research
- Telecommunications
- Travel & transportation

AMPLIFY YOUR MAJOR

- Choose supplemental coursework in social sciences, health science, business or engineering to enhance your data skills in the everyday practices of a broad array of career paths.
- Data scientists are multi-lingual writing code in different programming languages such as Python, R, SAS and SQL. Learning additional computer languages will increase the versatility of your future career options.
- Get involved in undergraduate research, it can make you stand out, and you may also have the opportunity to present and publish your research results.

"The classes I've taken have been very diverse, ranging from computer science, math and physics to classes such as economics, philosophy and literature. This has given me the opportunity to explore different areas and understand myself better. My greatest achievement was having a paper I worked on with my instructor accepted at a conference."

HUNG DO, Machine Learning Engineer, MoMo, B.S. Data Science, economics concentration, '21

FA2022

2022-23
Data Science
College of Natural Sciences and Mathematics

THE UNIVERSITY OF TOLEDO

	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR
EXPLORE YOUR MAJOR AND CAREER PATHWAYS	In the first year, you will have the chance to explore foundational courses along with some electives: ART 2800 Visual Literacy-Data Visualization HHS 2500 Data Science I Meet with your academic advisor to learn more about your plan of study and choose your area of concentration (minor), such as public health, environmental science, etc.	Explore research opportunities or connect with business professionals in organizations such as Data Science UToledo or the Young Entrepreneurs Society. Continue working on core requirements as well as your area of concentration (public health, astrophysics, environmental science, economics, etc.) which needs to include at least 17-20 credit hours of course work in the concentration/minor.	Dive deeper into your specialization in data science. Meet with your academic advisor to make sure you are on track for graduation and have planned out your courses for next year.	Be sure to finish up all your courses for your major and any optional minor and/or additional major(s). Final courses include Data Science Ethics, Econometrics I and Senior Capstone (Data Science II) - all preparing you for your future after graduation. Need to take the GRE? Start here.
CONNECT WITH OTHERS AND BUILD COMMUNITY	Attend the Student Involvement Fair in early fall; explore over 400 student organizations and attend campus events. Consider joining a fraternity or sorority and getting involved in Greek Life. Working on campus is a great way to meet others. Attend the Job Fair to learn about campus jobs!	Explore organizations that complement your major. Many colleges have academic-focused organizations. Learn more on InvoNet. Community service is a great way to get experience as well as give back to the community. Consider joining a volunteer organization.	Join a professional association related to your interests or career development: ▪ Data Science Association ▪ International Society for Data Science and Analytics (ISDA) Attend networking and professional development events.	Present your research at a research exhibition on campus. Consider attending and presenting your work at a regional or national conference with a faculty member for networking and exploring career opportunities. Be sure to include these experiences in your resume: community service, student leadership, organization membership and philanthropic efforts.
BUILD YOUR SKILLS THROUGH EXPERIENCE	Meet with a faculty member to discuss creative ways to volunteer or intern in your area of interest. Consider opportunities outside of the classroom. Join a student organization such as: ▪ Building Ohio's Sustainable Energy Future (BOSEF) ▪ Global Medical Brigades ▪ Society of Physics Students	Improve your study strategies and visit the Learning Enhancement Center. Explore summer job opportunities related to your major by scheduling a meeting with Career Services. Consider applying to the Office of Undergraduate Research Summer Research and Creative Activities Program to earn a research scholarship.	Consider doing research with a faculty member. UToledo students often apply for and receive funding for their research and present their results at conferences. Apply for funding through the Office of Undergraduate Research and find information about additional opportunities.	Data science is a high-demand field with high salaries. "The median annual wage for data scientists was $100,910 in May 2021 and jobs are projected to grow 36 percent from 2021 to 2031, must faster than average for all occupations."-BLS Investigate internships or full-time jobs related to careers of interest by attending events for graduating seniors sponsored by Career Services.
ENGAGE IN AN INCLUSIVE GLOBAL PERSPECTIVE	Get to know people who are different from you. Connect with the Office of Multicultural Student Success (OMSS) by attending OMSS History and Heritage Month events. Learn another language or culture to develop new perspectives and build your marketable skills. Visit World Languages and Cultures for more information.	Connect with the Education Abroad Office to learn more about the opportunities to live and learn in a different country. Meet with your advisor to see how your credit will transfer and discuss the best time to study away. Consider completing the OMSS Student Diversity Certificate program. Attend events sponsored by the Office of Diversity, Equity and Inclusion.	Join an international student organization to learn more about other cultures. Attend the I-Village event or I-Dinner, two premier UToledo international events.	Build your intercultural competencies by learning more about diversity, equity and inclusion through OMSS and the Office of Diversity, Equity and Inclusion programs.
PREPARE FOR POST-GRADUATION	Complete your Handshake Profile (use your UTAD log-in credentials). Explore What Can I Do With This Major? and Candid Career to learn about career paths and employers within your field of study. Meet with Career Services to begin developing your resume and a plan to get career ready.	Utilize Handshake and InvoNet to find internships, explore opportunities to meet employers and expand your network by attending career fairs and other events. Meet with Career Services to update your resume and LinkedIn profile.	Use Handshake to apply to part-time jobs, internships or externships to gain practical and relevant experience. Gain interviewing skills with Big Interview or schedule an appointment with Career Services for a mock interview. Join groups on LinkedIn reflecting specific careers or topics of interest in data science.	Solidify post-graduate plans. Get help from your academic advisor, faculty and Career Services with job searching, resumes, interviews and graduate school applications. Connect with internships, experiential learning, and more through the Academic Data Science Alliance and Handshake.

WHAT WILL I LEARN?
Develop your career readiness competencies to ensure you are prepared to launch your career upon graduation:

- Career & Self Development
- Communication
- Critical Thinking
- Equity & Inclusion
- Leadership
- Professionalism
- Teamwork
- Technology

HOW WILL I USE IT?
Use your degree to attain career positions such as:

- Business analyst
- Business intelligence analyst
- Cloud architect
- Computer network defense analyst
- Consultant
- Data analytics manager
- Data analyst
- Data architect
- Data engineer
- Data mining engineer
- Data scientist
- Database administrator
- Database developer
- HR business analyst
- Information technology lead
- Intelligence analyst
- Lecturer
- Machine learning engineer
- Marketing analyst
- Product manager
- Product marketing manager
- Quantitative ecologist
- Research scientist
- Scientific software developer
- Site reliability engineer
- Software engineer
- Solutions consultant
- Statistician