

Master of Science in Applied Data Science

Herbert Wertheim College of Engineering

Catia S. Silva, Ph.D.

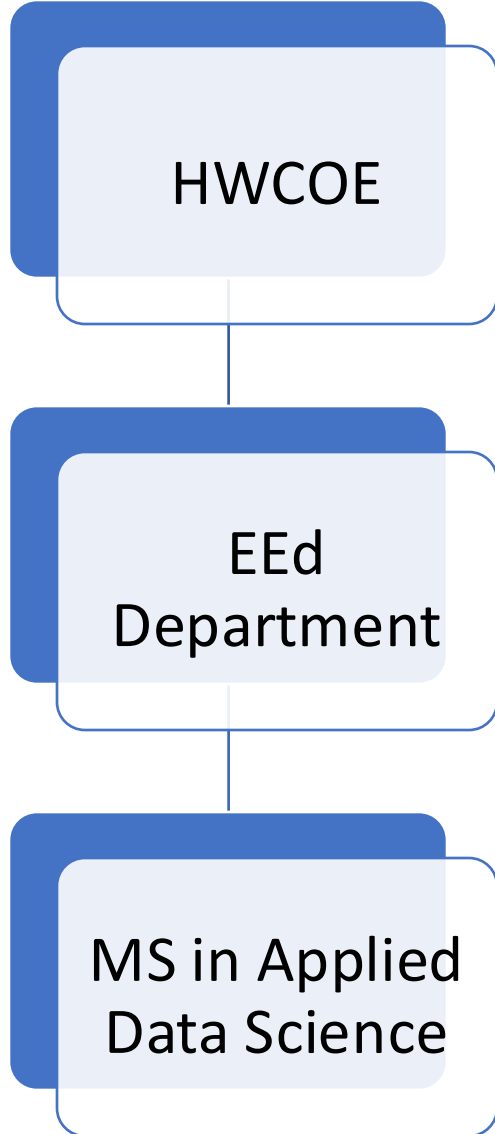
Program Coordinator for MS Applied Data Science & MS in AI Systems

Instructional Assistant Professor @ ECE, UF

A photograph of a large, multi-story brick building with a red-tiled roof, identified by an archway as the University of Florida. The archway is made of brick and has the words "University of Florida" inscribed on it. The building is surrounded by lush greenery, including palm trees and other tropical plants. In the foreground, there is a paved plaza with a circular brick pattern. The text "Congratulations on your admission to the Master of Science in Applied Data Science at the University of Florida!" is overlaid in a large, bold, blue font.

**Congratulations on your admission to the
Master of Science in Applied Data Science
at the University of Florida!**

MS in Applied Data Science



- The Department of Engineering Education (EEd) in the **Herbert Wertheim College of Engineering (HWCOE)** offers the:
 - **MS in Applied Data Science**
 - Website: msads.eng.ufl.edu



Idalis Villanueva, Ph.D.
EEd Department Chair



Catia S. Silva, Ph.D.
Program Coordinator



Lisa Hibbs
Academic Advisor

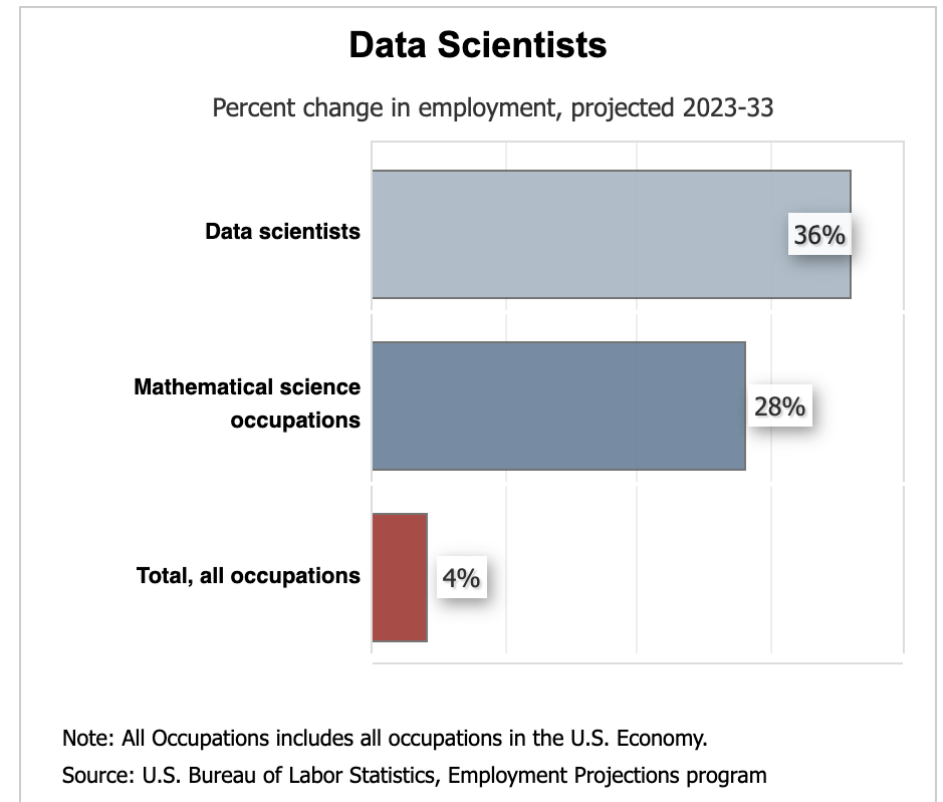


Pamela Simon
Academic Assistant
(Admissions)

What is the M.S. in Applied Data Science?

M.S. in Applied Data Science

- The Master of Science (M.S.) in Applied Data Science (MSADS) addresses the rising demand for data science professionals in today's dynamic technological landscape.
- Through its interdisciplinary approach, the program equips students with a comprehensive skillset, merging knowledge from diverse fields such as computer science, statistics, business, and a chosen specialization area.
- The MS program is an in-person, non-thesis major in Applied Data Science with a total of 30 credits hours.



In May 2023, the median annual wages for data scientists in the top industries in which they worked were as follows:

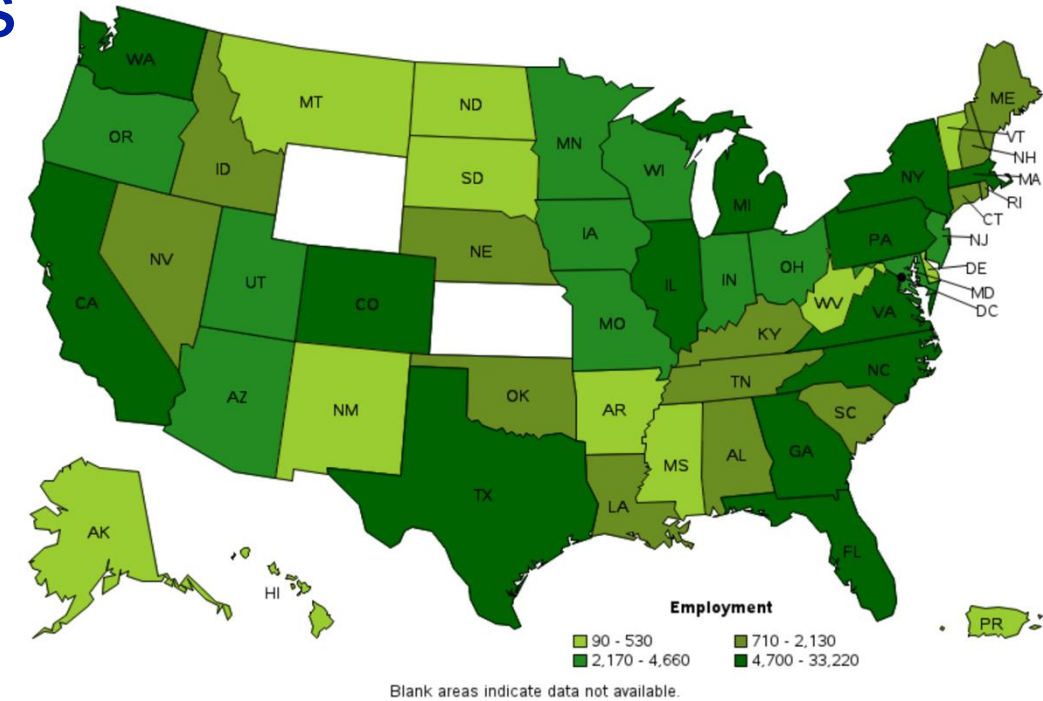
Scientific research and development services	\$126,430
Computer systems design and related services	118,400
Management of companies and enterprises	114,780
Insurance carriers and related activities	104,390
Management, scientific, and technical consulting services	103,000

Source: "[Data Scientists](#)" occupation
from U.S. Bureau of Labor Statistics

Target Audience & Industry Careers

- The program is designed for students or working professionals with a B.S. degree in a non-computing-related engineering field.
 - Non-computing-related engineering majors include aerospace, agricultural and biological, biomedical, civil, environmental, industrial, mechanical, transportation engineering, and more.
- The program will train you for a wide range of industry careers including finance and insurance, healthcare and social assistance, information, manufacturing, transportation, scientific and technological services, retail trade, and more.

Employment of data scientists, by state, May 2023

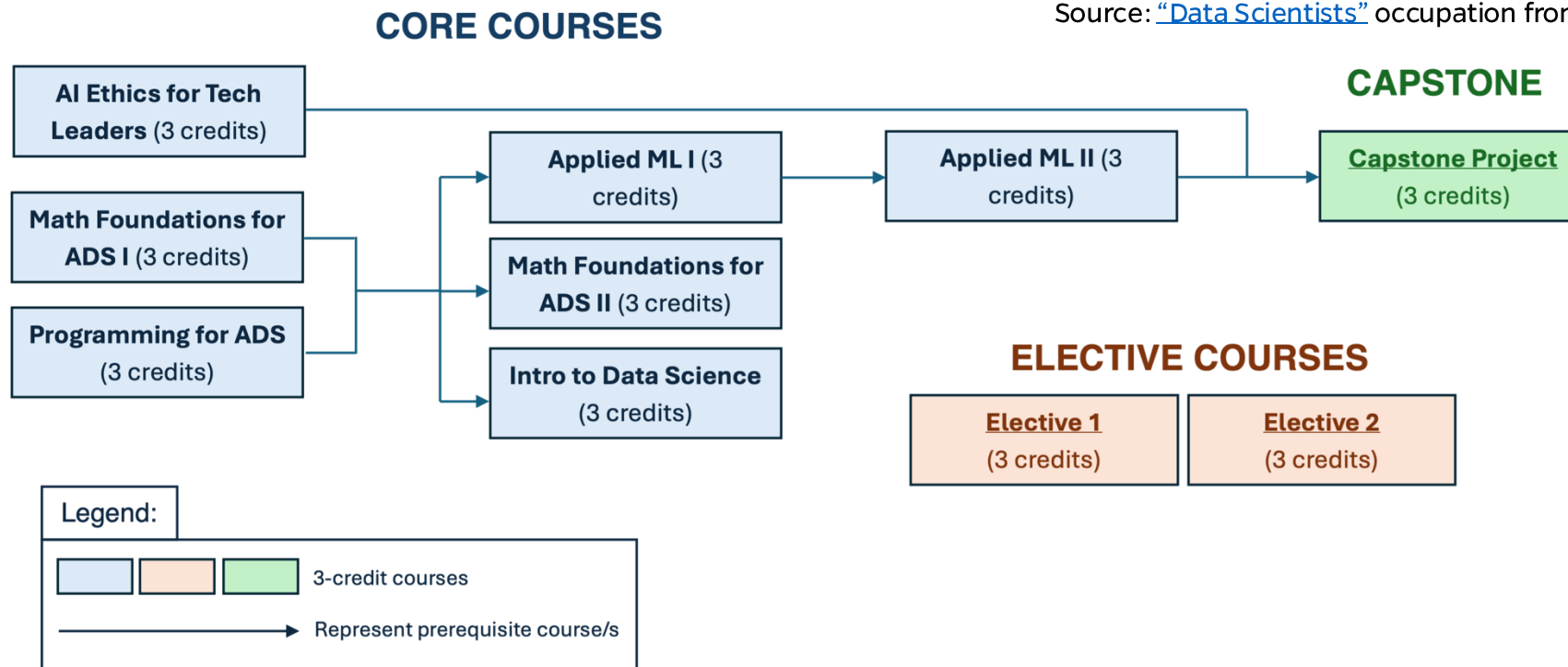


Source: [“Data Scientists”](#) occupation by state from U.S. Bureau of Labor Statistics

Curriculum

Curriculum

- The curriculum will consist of a set of:
 - 7 Core Courses (21 credit hours)
 - 2 Elective Courses (6 credit hours)
 - 1 Capstone Project (3 credit hours)



What Data Scientists Do

Data scientists use analytical tools and techniques to extract meaningful insights from data.

Duties

Data scientists typically do the following:

- Determine which data are available and useful for the project
- Collect, categorize, and analyze data
- Create, validate, test, and update algorithms and models
- Use data visualization software to present findings
- Make business recommendations to stakeholders based on data analysis

Source: “[Data Scientists](#)” occupation from U.S. Bureau of Labor Statistics

Curriculum – Elective Courses

Elective Courses (choose 2 in one specialization area)

AI	EEL 5406 Computational Photography	ESI 6617 High-Dimensional Data Analytics	EEE 6512 Image Processing and Computer Vision
Biomedical	EGN 6938 Biomedical Data Science	BME 6522 Biomedical Multivariate Signal Processing	BME 4760 Multimodal Data Mining
Agricultural and Biological Engineering	ABE 5643C Biological Systems Modeling	ABE 6649C Advanced Biological Systems Modeling	ABE 6840 Data Diagnostics
Chemical Engineering	ECH 6845 Chemical Process Data Science	ECH 6937 Fundamentals of Artificial Neural Networks	Note: some courses are not available every semester, please plan your electives in advance and consult the schedule.
Data Analytics in ISE	EIN 6905 Data Analytics for System Monitoring	ESI 6617 High-Dimensional Data Analytics	
Engineering Education	EGS 6020 Research Design in Engineering Education	EGS 6012 Research Methods in Engineering Education	
Environmental	ABE 6035 Advanced Remote Sensing: Science and Sensor	OCP 6168 Data Analysis Techniques for Coastal Ocean Engineers	
Transportation	EGN 5215 ML Applications in Civil Engineering	TTE 6505 Discrete Choice Analysis	

Standard Plan of Study

Currently listed as **EGN6933**.

	Year 1	Year 2
Fall	• EGN 6445 Mathematics for Data Science for Engineers • EGN 5442 Programming for Applied Data Science • EGN 6933 AI Ethics for Tech Leaders	• EEE 6778 Applied Machine Learning II • EGN 6933 Elective Course • EGN 6933 Elective Course
Spring	• EGN 6446 Mathematics for Data Science for Engineers II • CAP 5771 Introduction to Data Science • EEE 5776 Applied Machine Learning	• EGN 6933 Project in Applied Data Science

Internship & Research

- You may count up to 3 credits of internship work towards your degree.
 - Upon approval, a 3-credit internship would substitute a 3-credit elective course.
- You may engage in research in several forms:
 - As course credits, on a volunteering basis at 0-credits.
 - As a University employer, under an OPS Student Assistant or Research Assistant (RA) position¹.
- You may serve as a Teaching Assistant (TA).
 - This would not count towards your degree, but it may be valuable experience¹.

¹International students must always consult with their UF International Advisor prior to enrolling in any employment activity (paid, unpaid, volunteering, etc.).

Example – Plan of Study w/ Summer Internship

	Year 1	Year 2
Fall	• EGN 6445 Mathematics for Data Science for Engineers • EGN 5442 Programming for Applied Data Science • EGN 6933 AI Ethics for Tech Leaders	• EEE 6778 Applied Machine Learning II • EGN 6933 Elective Course • EGN 6933 Elective Course • EGN 6933 Project in Applied Data Science
Spring	• EGN 6446 Mathematics for Data Science for Engineers II • CAP 5771 Introduction to Data Science • EEE 5776 Applied Machine Learning	
Summer	• EGN 6933 Practical Work in Applied Data Science (3 credits)	

Capstone Project

Capstone Project

- Option 1: EGN6933 Project in Applied Data Science (3 credits or 1 course)
 - **Personal passion.** Some students have specific personal interests that they want to pursue on their own. As long as you can define a realistic business/organizational problem you are solving and have the necessary data to solve it, this can be a very fulfilling project.
 - **Extension of current work.** Many students maintain part-time jobs or find RA/OPS positions with faculty and want to leverage that work to become their Capstone. As long as there is a defined, discrete problem to be solved, this allows your capstone to enhance and support what you are already doing.
 - **Something new.** Many students want to do something different. Every semester, our faculty pursue possible capstone projects with industry partners and faculty/researchers at University of Florida. Students apply for these and get selected by those partners running the project(s).

Capstone Project

- Option 2: **Integrated Process & Product Design (IPPD)** (6 credits or 2 courses)
 - **Industry-sponsored** DS-based projects.
 - 2-semester commitment (**IPPD 1** in Fall and **IPPD 2** in subsequent Spring).
 - **IPPD 1 substitutes an elective course.**
 - IPPD 2 substitutes EGN6933 Project in Applied Data Science.
 - If you did not complete IPPD 1, you cannot enroll in IPPD 2.
 - Group project with other graduate students.

Example – Plan of Study w/ IPPD

	Year 1	Year 2
Fall	• EGN 6445 Mathematics for Data Science for Engineers • EGN 5442 Programming for Applied Data Science • EGN 6933 AI Ethics for Tech Leaders	• EEE 6778 Applied Machine Learning II • EGN 6933 Elective Course • EGN 6933 Elective Course • IPPD 1 – Capstone Project I
Spring	• EGN 6446 Mathematics for Data Science for Engineers II • CAP 5771 Introduction to Data Science • EEE 5776 Applied Machine Learning	• EGN 6933 Project in Applied Data Science • IPPD 2 – Capstone Project II

Planning for your 1st Semester at UF

Acceptance Letter

- If you haven't already, please send us your signed acceptance letter.

Registration

- Make sure there are **no holds** on your record
 - **Common holds:** ISIS, insurance, financial, credentials, etc.
 - Other holds: emergency contact (every 4 months), immunization hold, registration prep (every semester), local address information, student insurance, financial, etc.
 - “Degree/credential verification”. A hold on your record for this reason will keep you from registering! Contact the **Office of Admissions** immediately.
 - Email Lisa Hibbs at hibbslisa@ufl.edu when your holds are cleared.
- We will register you for your first semester.

Registration – continued

- Must register for 9 credits:
 - **EGN6933** Math Found for DS for Eng I,
 - **EGN5442** Programing for Applied Data Science,
 - **EGN6933** AI Ethics for Tech Leaders.
- 9 credits is a full-time load for graduate students.
- **Do not** register for more than 9 credits!
- Register for **at least one** course by 5 p.m. on Wednesday August 20th, to avoid the late registration fee (\$100).

Full Time Enrollment

- Students must be enrolled in a minimum of 9 credits for the fall and spring to be considered full-time.
- International students must always maintain a full-time schedule to satisfy visa requirements.
 - Except the summer semester and the last semester of the program.²

²For questions related to immigration, please consult with your UFIC international advisor.

Fall 2025 Important Dates

- **In-person Orientation:** Monday August 18th , 1pm – 5pm.
 - Agenda will be posted on the website.
- Classes begin Thursday, August 21st.
- Drop & Add Week is August 21st – 27th.
 - **The Advising office closes at 4:30 p.m. on August 27th. We will not be able to assist you after 4:30 p.m.!**
 - Your schedule needs to be set by the end of drop & add week (severe \$\$ consequences otherwise).
- Monday, September 1st Labor Day – No Classes
- More dates and holidays: <https://catalog.ufl.edu/UGRD/dates-deadlines/2025-2026/#fall25text>.

Fall 2025 Important Dates – continued

- Fees for courses are due by 3:30p.m. on Friday, September 5th.
 - (late = \$100 late payment fee)
 - Students with **Achievement Award** pay total amount shown on fees due statement LESS \$1500 in any semester registered for 9 credits.
- Please refer to the Graduate School Deadline URL below—
<https://gradcatalog.ufl.edu/graduate/calendar/>.

Grades & Transfer of Credits

Transfer of Credit

- MS students can transfer **up to 9 credits**.
- Transferred courses (specific courses) cannot have been counted toward another degree.
- Transfer should be done during the **first semester**.
 - Please email Lisa Hibbs, hibbslisa@ufl.edu, directly if you feel that you have credits that can be transferred to your Master's degree.

Course Equivalency

- If you believe that you have taken a course (or courses), including undergraduate course(s), that is **equivalent** to a course in the program's curriculum, you will need to take the following steps:
 - Obtain a copy of your finalized transcript from your prior institution.
 - Prepare a copy of the course syllabi and catalog description of the equivalent course(s) as well as any supporting material such as exams, projects, and homework.
 - Send (via email) these items, along with the equivalency form (email hibbslisa@ufl.edu for the form) to the instructor who teaches the core course for determining whether the course can be waived.
- Remember: This is a different process than **transferring** prior credits, a process which should be handled, with the help of your grad advisor early in your first semester.

Dropping a Course (Withdrawal)

- Graduate students can drop a **maximum of two courses** during their entire enrollment.
 - International students must file a UFIC RCL form.
- Students are **not allowed** to adjust schedules after the official drop & add period.

Grade Issues

- You must have **at least** a 3.0 overall grade point average and **at least** a 3.0 major GPA to graduate.
 - Students with less than a 3.0 are **not** considered in good standing.
 - Students with GPAs below a 3.0 will be **reviewed by the Graduate Affairs Committee** for further action (including possible dismissal) at the end of each semester.
- Any grade below C (e.g. C-, D+, etc.) **will not count** toward graduation.
- Repeating coursework is strongly discouraged.
- Undergraduate coursework **does not count** toward graduation.

“I” Incomplete Grades

- If a student fails to complete all course requirements, the instructor has the option to give a grade of “I” (incomplete).
- Most instructors will use this option **only** if there are extenuating circumstances (family emergency, medical situation, etc.).
- An “I” must be made up the following term.
- Students cannot sit in on a course to make up an “I” grade.
- Failure to correct an “I” will result in the grade being calculated as an E (fail) for the GPA.
- Students are **not allowed** to graduate with an “I”, “H”, “J”, or “N” on their record.

Resources

Program Questions

- For advising help, please email:
 - **Lisa Hibbs** at hibbslisa@ufl.edu or **Pam Simon** at phs@ufl.edu.
- For course or discipline-specific questions, please email the Program Director:
 - **Dr. Catia Silva** at catiaspsilva@ece.ufl.edu.



Lisa Hibbs
Academic Advisor



Pamela Simon
Academic Assistant
(Admissions)



Catia S. Silva, Ph.D.
Program Coordinator

Campus Resources

- UF Counseling Center – 301 Peabody Hall – 392-1575
- Student Mental Health – Infirmary Building – 24-hour helpline - 392-1171
- Student Healthcare Center – Infirmary Building – 392-3261
- University Police Department – Building 51, Museum Rd. 392-1111. Call 911 for emergencies.
- Dean of Students Office – 202 Peabody Hall
 - Disability Resource Center
 - Judicial Affairs
 - Multicultural Affairs
 - Student Legal Services

Engineering Education Resources

- The EED provides help with:
 - Course scheduling
 - Adding and dropping courses
 - Withdrawing from a semester
 - Petitions
 - Supervisory committees
 - Academic problems
 - Graduation
 - Exam sign-up
 - Internships
 - And tons of other things!
- **Please email us** if you have questions about **anything** – squelch a crisis before it grows unmanageable!!
- As a courtesy, when e-mailing EED, please **include your UFID number**.
- Always **email from your UFL.edu** account. This is the only address that will be used once enrolled.

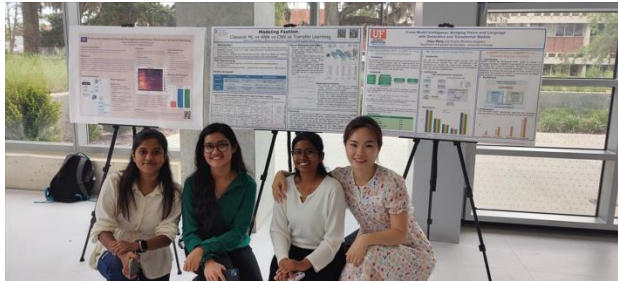
More Help

- International Friendship, www.internationalfriendship.org
 - An organization that exists to befriend and assist international students and their families during their transition and stay in America – free English classes every week, plus more. . .



**Are you ready to become a
Florida Gator?**

It's Great to be a Florida Gator!



The background of the slide features a large, stylized illustration of the University of Florida Gator mascot. The gator is depicted in a roaring pose, with its mouth wide open, showing sharp white teeth and a pink tongue. Its body is green with blue outlines, and it has a blue collar. The gator's eyes are white with blue outlines. The entire mascot is set against a light blue background with a subtle pattern of orange and blue stripes.

Go Gators!



POWERING THE NEW ENGINEER TO TRANSFORM THE FUTURE