

# AI Across the Statewide Curriculum



A partnership between **University of Florida** and **Florida Agricultural & Mechanical University**

Jennifer Drew<sup>1</sup>, Satyanarayan Dev<sup>2</sup>, Raquel Dias<sup>1</sup>, Sebastian Galindo<sup>3</sup>, Jim Hoover<sup>4</sup>, Christina Gardner-McCune<sup>5</sup>, Aavudai Anandhi Swamy<sup>2</sup>

<sup>1</sup>Microbiology & Cell Science, College of Agricultural & Life Sciences, UF; <sup>2</sup>Biological Systems Engineering, College of Agriculture & Food Sciences, FAMU; <sup>3</sup>Agricultural Education & Communication, CALS, UF; <sup>4</sup>Business Analytics & Artificial Intelligence, Warrington College of Business, UF; <sup>5</sup>Computer & Information Science & Engineering, Herbert Wertheim College of Engineering, UF

## Challenge

Developing technical expertise or relegating AI education to the computer and data science disciplines is not sufficient to develop a diverse and prepared AI workforce. Flexible, inclusive pathways that allow students of diverse educational backgrounds and technical maturity to solve the complex, real-world problems are needed.

## Goal

Facilitate access to cutting-edge technologies, expertise, and experiential learning to diverse students across Florida and beyond, providing the next-generation workforce with the skills they need to work across institutional, disciplinary, and historical disparities and boundaries.

## Strategy

3-year program to enhance the undergraduate curriculum and increase diversity in AI by providing direct support to 165 students and 45 faculty through scholarships, research experiences, and course development awards. The broader impact of this work will reach >1000 students.

## Aims and Activities

| 1. Facilitate AI curriculum across FL  | 2. Expand participation and diversity   | 3. Address real-world needs   | 4. Assess project impact  |
|--|---|---|---|
| <p>Enhance undergrad AI curriculum at UF + FAMU:</p> <ul style="list-style-type: none"> <li>Develop new AI courses</li> <li>Revamp existing courses with AI</li> <li>Upgrade AI courses with experiential learning</li> </ul> <p>Faculty Course Development Awards – 45 expected</p> | <p>Broaden participation of undergraduates</p> <p>Increase enrollment and access in 3-credit AI certificate program</p> <p>Increase diversity of backgrounds, expertise, approach</p> <p>AI Diversity Fellowships to Students – 30 awarded, 90 expected</p> | <p>Encourage student team and individual research with university and external partners</p> <p>Provide HiPerGator support</p> <p>AI Undergraduate Research Team Awards – 90 expected</p> <p>AI Undergraduate Individual Research Awards – 75 expected</p> | <p>Measure change in skills, perceptions, knowledge in students and faculty and institution</p> <p>Establish core competencies in undergraduate applied AI education</p> <p>Establish and disseminate best practices for inter-institution partnerships</p> <p>Sustain impact</p> |

## Project Partners + Resources

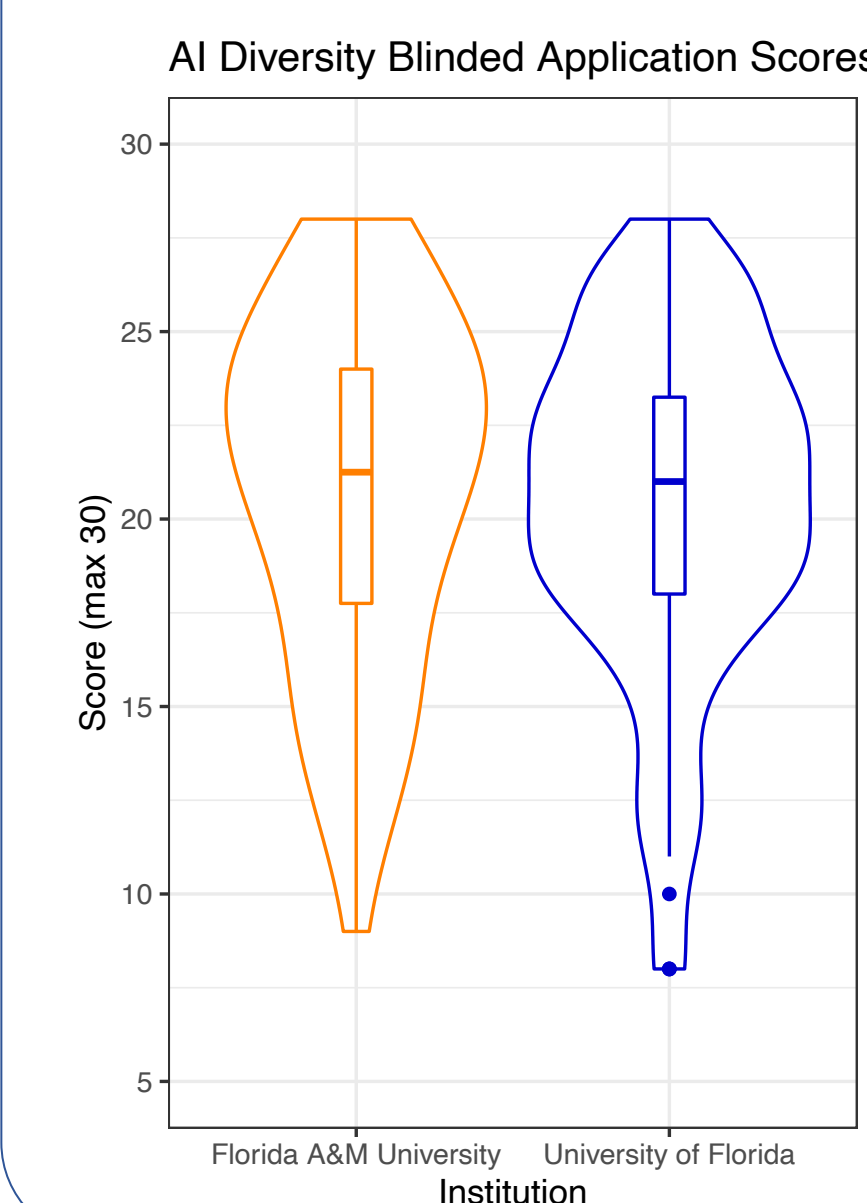


Top ranked public HBCU

**AI ACROSS THE CUR**  
Undergraduate Certificate in AI Fundamentals and Applications

**UNDERGRADUATE CERTIFICATE IN AI FUNDAMENTALS AND APPLICATIONS**

## Results and Impact



Shared application and blind scoring process reached proportional numbers of applicants and resulted in equivalent score distributions between the two institutions. Work in progress to disseminate approach as a best practice in unbiased and equitable process for student support.

| AI Diversity Fellows |            |                               |                        |                     |
|----------------------|------------|-------------------------------|------------------------|---------------------|
| 30 awarded In Yr 1   | 53% Female | 60% Black or African-American | 23% Hispanic or Latinx | 23 Different majors |

## Student Voices... How does your participation in this program enhance diversity in AI?

*As someone who grew up in Latin America, I believe that my participation in this program will promote diversity...Primarily, by joining the program I will be shifting the ethnical demographics of involvement in A.I., which will help to accurately represent the interest in the field by the Latino community. I will encourage them to join a space where they feel heard and represented. I can attest that working with students and faculty that you can relate to immensely increases your motivation to learn and participate in class discussions. Additionally, when working in projects with members of other racial and ethnical groups, I will contribute my unique experiences and points of view not only in the classroom, but also during informal group discussions after class. This type of cultural exchange helps to promote a mutual understanding and facilitates conversations in social, academic, and professional environments. "*

*"there are significant problems within the world of AI speech recognition. For one, female assistants reinforce the role of women as "helpers". Within the realm of speech recognition, higher-pitched, often female voices, have lower rates of successful recognition than lower-pitched, male voices. This reflects the makeup of artificial intelligence as a science, which consists mostly of men. Through AI, I hope to improve the abilities of speech recognition software to account for more diversity in users, including gender, race, and language. "*

*"As a pre-physical therapist student, I want to stress the inequities in health care I see in the United States. People of color and low-income families have historically been underserved by the medical community. Therefore, many of these communities often have feelings of distrust toward medical professionals. Having an AI option could encourage people to seek medical help by providing cost-effective and unbiased aid. The physical therapy field is already exploring AI options with apps. For example, Physitrack is an app that tracks exercises, performance, and outcomes at home. Physitrack is an alternative to patients who can not afford another session or patients who are uncomfortable asking questions to their physical therapist"*

## Acknowledgements

This material is based upon work supported by the National Science Foundation under grant #2123440 HDR DSC: AI Across the Statewide Curriculum. Disclaimer: Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the NSF.



To learn more:

