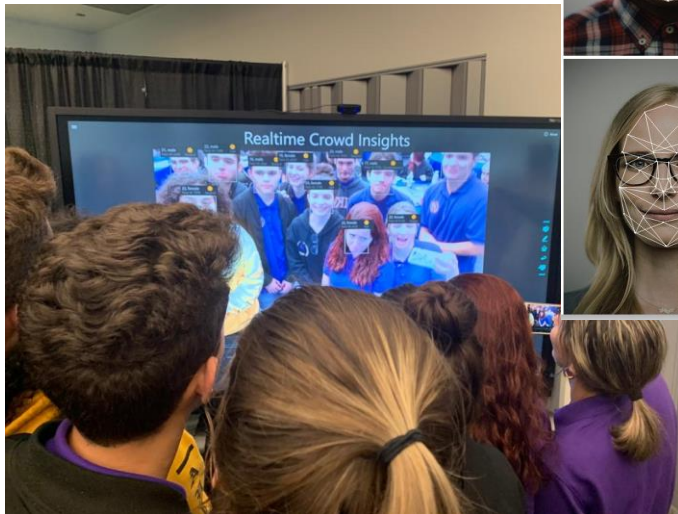


“Ethical Considerations and Social Responsibility of Facial Recognition adoption”

*Event hosted at Eduardo Padrón Campus, Miami Dade College
November 14, 2019*



Activity Background

Miami Dade College's (MDC) School of Engineering + Technology (EnTec) was selected to receive part of \$2.4 million awarded to 17 initiatives nationwide to integrate ethics into undergraduate computer science courses and programming. The **Responsible Computer Science (RCS) Challenge** is an ambitious initiative by **Omidyar Network, Mozilla, Schmidt Futures,** and **Craig Newmark Philanthropies,** and aims to integrate ethics and social responsibility into undergraduate computer science curricula and pedagogy at U.S. colleges and universities.

Through the grant award, the RCS Challenge provides MDC the ability to leverage its existing resources in achieving this outcome – by creating a rich platform for collaboration and learning among students, faculty, and community-based organizations to make an impact in our community while preparing students for a more complex marketplace. This opportunity provides incentivized avenues for MDC students to develop and apply social responsibility and ethical practices embedded within their day-to-day course work as well as extracurricular activities.

In response to this challenge, the School of EnTec collaborated with **MDC's Office of Social Change Initiatives,** the **Idea Center** and the **Honors College at the Padrón Campus** to host a unique event. *"Ethical Considerations and Social Responsibility of Facial Recognition adoption"* was hosted for the Honors College students on November 14, 2019 and engaged over 90 students representing diverse areas of study at the College. The goals of this event were to expose students to the relevance and application of ethics and social responsibility in technology today through a panel discussion involving experts in the field. The discussion was followed by a role-playing exercise that demonstrated to students how the use of new technology could impact the society in both intended and unintended ways.

Event Agenda (105 minutes)

3:30pm - 4:10pm: Panel discussion about facial recognition technology and its ethical implications to society

4:10pm - 4:20pm: Introduction to empathy

4:20pm - 4:30pm: Introduction to case study + assignment of roles

4:30pm - 4:40pm: Independent and group prep work on role-play scenario

4:40pm - 5:00pm: Scenario role-playing

5:00pm - 5:15pm: General group discussion + conclusions

Event Run-of-Show

Part One: Expert Panel Discussion about facial recognition technology and its ethical implications to society

The first part of the event consisted of an expert panel discussion on the development and implementation of facial recognition software today. The panel was moderated by Lucas Hernandez, Microsoft's Director of Civic Engagement office in Miami. The panelists, which have relevant backgrounds and experiences in this issue, were:

- Brian Brackeen, General Manager at Lightship Capital Investment Fund and founder of Kairos, a facial recognition company based in South Florida.
- Eldys Diaz, Executive Officer to the Chief at City of Miami Police Department
- Rahul Dass, doctoral student in Computer Science at the University of Miami and researcher on machine learning and computer vision.



The presentation and discussion described some of the new possibilities afforded by facial recognition software, highlighting how algorithms function to allow the software to improve. It was also discussed that newer versions of the software can now generate “new” faces from composites of past images – this being one step in improving the accuracy of the software in identifying different face types.

The discussion included questions about the different stages of development and implementation for various components of facial recognition software today, including commerce and community policing. One of the main concerns for its use in policing was also highlighted – the fact that the software has a significant number of false positives for non-Caucasians.

The panel discussion enabled the students to see the pros and cons of implementing this software by any local police department. This conversation set the stage for the role-playing activity that followed in part two of the event.

Part Two: Using empathy to better understand the complexities of facial recognition and Role-Play Scenario

Before asking the students to take-on different profiles in a facial recognition role-play scenario, they were engaged in a brief dialogue and exercise focusing on the role of empathy in ethical design. This portion of the activity was facilitated by Gustavo Grande, Program Manager at the Idea Center.

One of the primary methods of empathy training is to encourage a student to take on the role of another person. Empathy is considered a motivating factor for unselfish, prosocial behavior, whereas a lack of empathy is related to antisocial behavior. Empathy, however, is not just about hugs and pats on the back. It is a critically valuable skill that can make individuals more productive in work environments that require solutions-design and collaboration.



The second part of the event underlined that decisions about technology implementation have social ramifications and are not value-free. It highlighted that there are, on the one hand, significant questions about security that play out against questions of privacy in the debate on facial recognition software. The focus of this opening was on how developing empathy can facilitate better moral decision making overall.



The opening conversation on empathy set up the role-playing portion to have students empathize with the role of various decision-makers who were responsible for deciding whether a certain city should adopt the use of facial recognition technology in its police department.

The goal of the role-playing activity was three-fold: to get students (a) to consider the various values of the decision-makers involved, (b) to reflect on how those values inform the decision-making of the various individual involved, and (c) to have students arrive at a decision collectively about whether or not they would recommend implementing the facial recognition software if they were in the assumed roles.

The role-specific questions that were provided to the students in order to prepare them for the activity were designed to avoid simplistic characterizations or generalizations about those persona – an example being that an owner would only care about maximizing profits. While some may, indeed, many other owners also see themselves first as citizens, family members, and community members. Each of the values associated with the different roles any one person plays at a time could certainly influence decision-making.



As proponents of corporate social responsibility emphasize, a company owner may act on the considerations of many different values at any one given time. In fact, in many cases it might also be in the best interest of a company to do so, since considering the effects of one's business on all the stakeholders can correlate with long-term positive effects for a business. In various other roles, students noted some inherent tensions or complications. For example, different citizens had different opinions about the values of safety or privacy. Similarly, individuals stand to be impacted differently by the technology and its flaws so they might evaluate and approve (or not approve) its use quite differently.

The Role Play Scenario: Facial recognition technology adoption by the Jupiter Police Department

Before proceeding with the official implementation of Face® Reveal (a facial recognition technology and platform) at the Jupiter Police Department (JPD), a formal community engagement process between city officials and various stakeholders must occur.

The City Mayor will convene a diverse collection of stakeholders to receive public comment and community input, and ultimately establish a fuller understanding of how this emerging technology might impact the City of Jupiter and its residents. Although city officials are intrigued by the economic aspects of this initiative, their primary responsibility during the stakeholder committee process is to protect the public's interest and well-being.

The stakeholder committee, which will include representatives of the company with computer science expertise, local policymakers and citizens that might be affected by the technology, must decide whether to recommend that the JPD fully implements the facial recognition technology.

In groups of 10 students per table and one moderator, students were asked to assume one of 5 particular roles. The roles included:

1. Owner of Face® Reveal, facial recognition company
2. Software developer at Face® Reveal
3. Chief Technology Officer at the Jupiter Police Department
4. Citizen who might be affected by the use of this technology
5. Local government policymaker



The role of the City Mayor was assumed at each table by a moderator to facilitate the group discussion about how facial recognition might impact the safety of the local citizens. The moderators that participated in the activity were:

- Sandra LaFleur, Director of Social Change Initiatives, MDC
- Antonio Delgado, Dean of Engineering, Technology and Design, MDC
- George Gabb, Faculty of Computer Science and PI of Mozilla Grant, MDC
- Dr. Darrell Arnold, Faculty from Art & Philosophy, MDC

- Alfonso Lafuente, Mozilla Grant Coordinator, MDC
- Natasha Esteves, Institute of Civic Engagement and Democracy Coordinator, MDC
- Lucas Hernandez, Director of Civic Engagement at Microsoft
- Brian Brackeen, Founder of Kairos
- Eldys Diaz, Executive Officer to the Chief at City of Miami Police Department
- Rahul Dass- Computer Science Ph.D. student at the University of Miami

Each workgroup focused on three activities: (1) engaging in an ice-breaker in order to get to know one another and doing some reading as prep work for the activity, (2) individual and group reflection work based on the roles assigned to each student at the table,, (3) actual role-play dialogue during the table’s “city meeting” in order to arrive at a consensus on whether to implement the new facial recognition technology at the police department.



After the role-playing discussion, each table had to agree upon their final recommendation as a group and then one student per table was assigned to share in the larger debrief about:

- Which stakeholder considerations were the most significant factors in the group’s decision?
- What role did computer science knowledge/expertise play in the group’s decision?
- Which ethical considerations did the group think were the most important to take into account?

Results of the role-playing activity

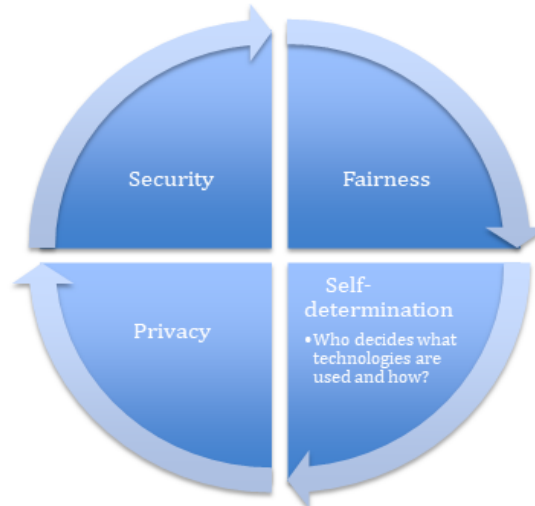
In the final phase, each group reported on its decision-making and there was a general

discussion of the ethical issues that were involved in the decision.

Each group came out in favor of the implementation of the facial recognition software. In general, the groups did show that they grappled with the question of individual privacy over public safety. Some groups supported its implementation but had caveats and reservations about the use. One group, for example, highlighted that it should be implemented on a trial basis, and that after a year, a review of the implementation should be conducted and its further use be then approved or denied. They highlighted that there should be regular reviews of the use.

Conclusions

The summary pulled together the ethical issues involved in the overall discussion. It highlighted that in addition to the values of security versus safety, two others were often at play – namely those of fairness and self-determination. The ethical concerns expressed in the role-playing and the discussions of the event just as often focused on the need for equity in the use and the social outcomes of the use. One of the main problems highlighted was that the software was simply less accurate for non-Caucasian men than for others, aptly recognizing that various citizens might have various concerns. Related to this, there seemed to be general agreement that the lack of equity was a critical problem to be considered. At the same time, however, there was a hopefulness in the group that the software would improve over time to mitigate the damage of such false positives and provide the intended positive benefits for the community.



Another of the concerns regarding equity also recognized that the police would be likely to use the software on some groups more than on others. The concern about this bled over into the ethical concern about “self-determination”—which is the concern about who in society is to make the decisions about whether, how and under what conditions to use the software. One ethical concern was about how the citizens might be included in decisions about the use and about how the information about such decisions could at least be made transparent to the voters. For example, would there be information sites online where the citizens might learn of how the software is being used? Would there be public fora where this use could be discussed? Would there be regular reviews of the use to see that its social uses were indeed beneficial and equitable?



Beyond the talk of values, ethical concerns were also raised about how to keep these considerations on the table during the different phases of the software development and use—namely, in development, implementation, and administration. For example, how could the software developers design the technology to mitigate risks? How could they build improvements so that it has fewer false positives? How could they design it so that the information gathered is safe against hackers who might use the information for criminal purposes? How might decisions be made about what areas of a community this can be implemented in? Who makes those decisions? How transparent are the decisions? In administration, what regulations might be needed to prevent the wrong individuals from gaining access to the information gathered? What kind of training would those who interpret the data be provided? At each of the stages identified, there are particular risks that are present. Ethical thinking is thus about not only the values that we care about, but also about the risks that are present at each stage of development, implementation and administration.

Supplementing theoretical discussion with social-change solutions thinking enabled students to experience first-hand the ethical concerns of technology and engage with it. This approach exposed them to authentic trends and local challenges, humanizing the ethical issues involved in technology. Students learned to consider the impact of technology on users of diverse socioeconomic backgrounds. It was a great opportunity for considering better experiences, security, and outcomes of all kinds through the use of facial recognition and related tech.

The conclusion of the activity was provided by Dr. Darrell Arnold, Faculty from Art & Philosophy at Miami Dade College, and President of The Humanities and Technology Association.

Student Feedback

After the event, all students that participated received a survey to improve the activity. The results reflect:

- 93% evaluated the activity as Extremely Good or Very Good
- 86.7% were interested in attending similar activities in the future
- The main recommendation for improvement was to add more time for role-playing
- Per the students, highlights of the event were:
 - o The topic
 - o The speakers
 - o The role-play activity