

Globalization in Computer Science Education: A Case Study of Wentworth's Open House for Nigeria

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ABSTRACT

It is important for colleges to have a diverse applicant pool as part of their diversity and inclusion practices. This paper discusses the recent efforts of faculty and staff at Wentworth Institute of Technology's School of Computing and Data Science (SCDS), to increase the population of international students from Africa as part of the diversity and inclusion strategies of the University. This resulted in a 2-day event hosted by SCDS, to create awareness about the school's diversity plans. The event tagged "Virtual Open House for Nigeria" was an inaugural open house event for prospective international students, their families, and sponsors to meet the Wentworth SCDS faculty and learn about our specialties in Computer Science, Computer Networking, Cybersecurity, Applied Mathematics, Applied Computer Science, and Data Science / Business Analytics, and was hosted virtually on October 8-9 2021. Day 1 of the event featured an opportunity for prospective international students from Nigeria, as well as their parents, sponsors, or teachers, to meet the Wentworth Dean and faculty and learn about our specialties in Computer Science, Computer Networking, Cybersecurity, Applied Mathematics, Applied Computer Science, Data Science/Business Analytics, while day 2 featured Data Science and Machine Learning Workshop, as well as a session on strong application and funding tips for prospective students. This paper summarizes some of the activities by the School of Computing and Data Science at Wentworth Institute of Technology, to demonstrate its commitment to inclusiveness through recruitment agenda for international students. Thus, we discuss the day one activities, where the potential students, parents and mentors had the opportunity of interacting with Wentworth faculty and staff in any of three two-hour sessions.

Keywords: Diversity, Inclusion, Nigeria

1 Introduction

Nigeria is the most populous country in Africa. However, with about 60% adult literacy rate, and high demand for quality education among the youths, there have been a lot of challenges in getting high-quality education due to numerous challenges like political and economic instability (BIRABIL *et al.* 2020) This has led to massive interest among Nigerians in seeking for international education.

Thus, as part of giving back to her community, a Wentworth faculty member who immigrated to the United States after getting her education in Nigeria, initiated the open house event to create opportunities for Nigerians who are interested in international education, especially in the areas of Artificial Intelligence (AI) and Machine Learning, being their expertise. The event, termed "Virtual Open House for Nigeria," served as an inaugural open house for prospective international students, their families, and sponsors to meet with faculty members from the School of Computing and Data Science and learn about the school's specialties in Computer Science, Computer Networking, Cybersecurity, Applied Mathematics, Applied Computer Science, Data Science, and Business Analytics. It was also an opportunity for participants to learn about the opportunities offered by Wentworth in the new undergraduate programs in Information Technology and Data Science and a graduate program in Cybersecurity Analysis which would be launched in Fall 2022.



2 Motivation

The School of Computing and Data Science (SCDS) is the second-largest school on the campus of Wentworth Institute of Technology, with approximately 900 students and 40 full-time faculty members, all of whom come from a wide range of cultural and ethnic backgrounds. The retention, diversification, globalization, and inclusion of students are the primary objectives of the school. Given the fact that African immigrants, as opposed to other immigrants, complete college at a higher rate than other immigrants, the SCDS decided to organize the inaugural outreach for prospective African students, with a special focus on Nigeria, being the most populous nation in Africa as the prospective country for the inaugural open house event, especially since some of the school's faculty members already have personal ties with Nigeria. The event organizer, Professor Yetunde Folajimi, a Nigerian woman who wanted to give back to her home country and increase the presence of WIT in Nigeria. Professor Folajimi is a Nigerian native who emigrated to the United States from University of Ibadan in Nigeria, to continue her faculty career in the fields of artificial intelligence and video gaming.

3 The Challenges of AI Education in Nigeria

In Nigeria, many higher institutions are already offering computer science programs but there is a scarcity of qualified artificial intelligence practitioners, which has an impact on training and mentoring of prospective artificial intelligence specialists. While there are some training and certification institutes, a bachelor's or master's degree in artificial intelligence, machine learning, machine vision, or deep learning is not currently offered at any Nigerian higher education institution, thereby calling for some interventions in order to train future workforce if Nigeria is to catch up with the global AI transformation. In addition, (Ogunode 2020) identifies inadequate funding of computer science programs, computer science programs with insufficient financing, computer science lecturers with insufficient experience, inadequate ICT infrastructure facilities, brain drain, strike actions, high costs of internet data and electronic services, inadequate computer science instructors, poor technological facilities, and high costs of internet data as major challenges faced by computer science education in Nigeria. This situation has resulted in more Nigerians seeking for better opportunities for more quality education abroad.

4 Methodology

In order to assist international students in gaining an understanding of the high-quality education offered by Wentworth, as well as how Wentworth can channel its resources to meet their specific needs, particularly in the areas of artificial intelligence, data science, and machine learning education, we have developed a methodology that will include parents and sponsors as active participants in their children's educational journey, through the open house session to enable prospective parents, sponsors and students to interact with the faculty and staff at Wentworth's School of Computing and Data Science as well as staff from the admissions and marketing departments. The virtual open house event was held through Zoom on October 8 and 9, with the event being broadcast live on the school's YouTube page. It is the focus of this paper to discuss day 1 of the event, when participants had the opportunity to meet the Dean and faculty from Wentworth, as well as learn about the school's specialties in Computer Science, Computer Networking, Cyber-security, Applied Mathematics, Applied Computer Science, and Data Science/ Business Analytics, among other things. Participants pre-registered to attend one of three two-hour sessions that were given for the event: 8:00 AM – 10:00 AM ES, 10:00 AM – 12:00 PM EST, and 12:00 PM – 2:00 PM EST. Participants were required to pre-register in order to participate.

5 Publicity

The event was promoted on the school's social media channels (Facebook and LinkedIn), as well as on the University's website, among other places. Throughout addition, direct emails were sent to faculty connections in Nigeria in order to spread the word about the event within their respective student bodies. Participants were also needed to complete a registration form on the University's website before taking part in the event.

6 Attendance

There were more than 200 prospective participants that registered for the event, which was subsequently attended by approximately 95 Nigerian students across the three sessions held. The guests were either interested in earning an undergraduate or graduate degree at Wentworth, or in participating in a collaborative research project with Wentworth research students or faculty members, depending on their background. There were also some Nigerian parents and sponsors in attendance who were interested in learning more about the process of sponsoring their children for undergraduate studies at Wentworth.

7 Discussion

The participants got the opportunity to interact with members of the SCDS staff and instructors, as well as members of the Wentworth Admissions Unit and the Marketing and Communication Department. Each of the three sessions in Day 1 was headed by Durga Suresh-Menon, Dean of SCDS, who made a presentation highlighting all of the programs offered by the school, including the four existing undergraduate degrees. Figure 1 is capture from her introduction. Dean Suresh-Menon also spoke about the three graduate programs offered at the university, which are in data science, computer science, and business analytics, with the objective of adding cybersecurity analytics in September 2022.

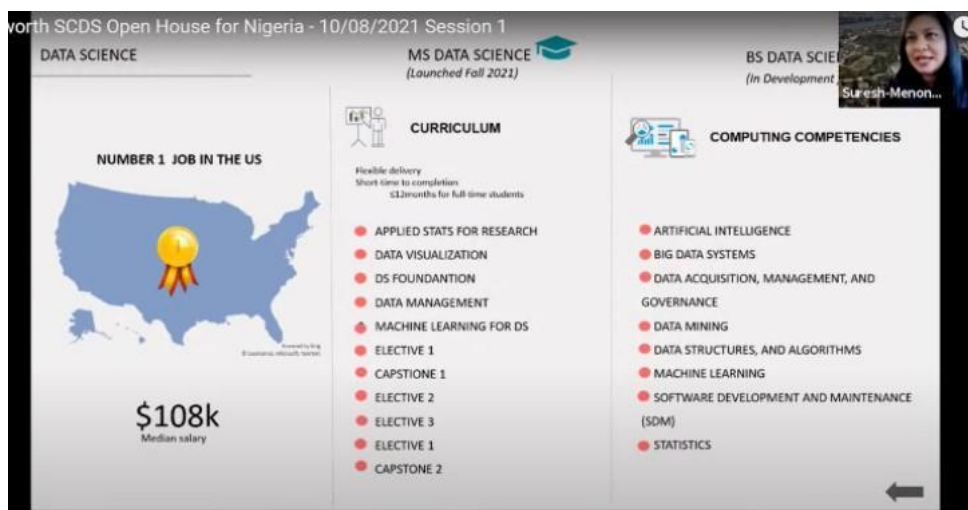


Figure 1: Dean's presentation of some information about the school's Data Science program

8 Conclusion

Majority of the questions that were raised during the presentation concerned graduate programs in data science and how to obtain possibilities for scholarships and financial aid. Shortage of funds have been observed as a critical challenge in educational development in Nigeria (Udida *et al.* 2009) (Okoli, Ogbondah, and Ewor 2016) However, while the admissions representative made it clear that there is no full-funded scholarship or fellowship available, the following recommendations were offered in terms of finance options:

- For international students, Wentworth offers an average of 20% in merit-based scholarships in the form

of tuition waivers per year.

- International students are not eligible for loans or grants, but they are encouraged to investigate loan and grant opportunities available in their home countries.
- Students were encouraged to attend the financing presentation that will take place on day two.
- The students scholar program at WIT gives graduate students with an opportunity to work and be compensated for around 10 hours each week.

9 Publisher's Note

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How to Cite

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