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NEWS RELEASE

Bridging the digital divide: Youth empowerment through AI training at UP Mamelodi Campus



Learners showcasing their AI solutions to assist visually impaired individuals in recognising objects.

PRETORIA – The University of Pretoria’s (UP) [Mamelodi Campus](#) recently hosted students from the [Hong Kong Polytechnic University \(PolyU\)](#) to teach local high school learners how to use artificial intelligence (AI) to create solutions to real-world problems.

“The *Youth AI Object Recognition Programming Workshop and Learning Showcase*, held in January 2025, represents an exciting collaboration between the [Department of Computing](#) and the [Service-Learning and Leadership Office](#) at the Hong Kong Polytechnic University, and UP’s Mamelodi Campus,” said [Dr Martina Jordaan](#), Head of Community Engagement Research at Mamelodi Campus.

Dr Jordaan explained that this initiative is designed to raise awareness among 107 local learners about the

challenges posed by the information and digital divide, and to promote STEM (Science, Technology, Engineering and Mathematics) literacy, which is increasingly crucial in today's technology-driven society.

During the four-day programme, PolyU students imparted their knowledge of machine learning and block programming to their younger peers in Mamelodi, with a focus on using AI to enhance accessibility for people with visual impairments.

Throughout the programme, participants had the opportunity to develop unique AI solutions to address various daily challenges faced by visually impaired individuals (VIPs).

To enhance engagement and create a stimulating learning environment, PolyU students coordinated fun, interactive activities designed to foster creativity and encourage participants to think outside the box while working on their prototypes.

Teams showcased their innovative projects at the end of the workshop, competing for awards that recognised their collaborative efforts in designing the most appealing and functional assistive technologies. The projects were evaluated based on their creativity, usability, and potential impact, with the best solutions honoured for their exceptional promise to improve the daily lives of VIPs within the community.

Fifth year of collaboration

Dr Jordaan said the partnership with Hong Kong Polytechnic University began in 2021, making this the fifth workshop conducted by PolyU and the second one hosted face-to-face. "The feedback from participants was overwhelmingly positive," she said.

Lovenees Mufiri, a Grade 11 learner from Nellmapius Secondary School, said she gained knowledge about deep learning and machine learning, and that the PolyU students inspired her to strive for greater academic success.

Similarly, Thamaga Madiga, a Grade 10 learner from Hoërskool Overkruin, described the workshop as "incredibly enriching" and said it helped him think critically and expand his knowledge base.

Makubu Mahlatji, a Grade 11 learner from Hoërskool Silverton, reflected on her experience of attending all the PolyU workshops. She said the AI object recognition programme equipped her with essential life skills such as effective collaboration, communication, and teamwork, which she had not previously recognised as important.

"This emphasis on practical skills enhances technological understanding and prepares participants for future challenges in their academic and professional lives," Dr Jordaan said. "The workshop significantly contributed to bridging the digital divide in the Mamelodi community, while empowering young learners to become active participants in the evolving world of technology."

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ABOUT THE UNIVERSITY OF PRETORIA

The University of Pretoria (UP) is one of the largest contact and residential universities in South Africa, with its administration offices located on its Hatfield Campus in Pretoria. This 115-year-old institution is also one of the largest producers of research in South Africa.

Spread over seven campuses, it has nine faculties and a business school, the [Gordon Institute of Business Science](#) (GIBS). It is the only university in the country with a [Faculty of Veterinary Science](#), which is ranked the best in Africa. UP has 120 academic departments and 92 centres and institutes, accommodating more than 56 000 students and offering about 1 100 study programmes. It has the most academic staff with PhDs (70%), NRF-rated researchers (613).

The 2025 Times Higher Education subject rankings placed UP first in South Africa in the fields of [Accounting](#) and [Finance](#); [Architecture](#); [Electrical and Electronic Engineering](#); Law; Sport Science; and Veterinary Science. UP's Faculty of Law has been ranked as the top law school in Africa for a remarkable eighth consecutive year.

Quacquarelli Symonds (QS) ranked the University among the top five in Africa, as part of their [2024 World University Rankings \(WUR\)](#). UP was the only South African university featured in the [2023 World University Rankings for Innovation \(WURI\)](#), falling within in the 101-200 range of innovative universities.

For more information, please go to www.up.ac.za