



FLORIDA ATLANTIC UNIVERSITY

DATA SCIENCE, ANALYTICS, AND ARTIFICIAL INTELLIGENCE CONFERENCE

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BREAKOUT SESSION PRESENTATION DESCRIPTION

CHARLES E. SCHMIDT COLLEGE OF SCIENCE

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Facial Recognition Of Hybrid Monkeys

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This project was designed to develop facial recognition software that could be used to identify individual *Cercopithecus* monkeys in Gombe National Park in Tanzania, East Africa. The purpose was to ensure that data and samples of current and future research projects are attributed to the correct individuals. This was accomplished by utilizing a combination of machine learning, object detection, and image classification. Using 16,226 images of 62 different identified individuals, a YOLO v3 object detection system to detect the face of a monkey was combined with a custom trained fast.ai resnet 50 learning model. The sequence of these two algorithms resulted in a machine learning model that is 99.44% accurate at detecting and identifying individual monkeys from this population.

Keywords: Machine learning, Facial Recognition, Primates