

# OSAHOR Michael Uche

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## INTERESTS

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- **Machine Learning:** Deep learning, Computer vision, Image quality assessment, Adversarial learning, Object detection, etc.

## PROGRAMMING SKILLS

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- **Platforms:** PyTorch, TorchScript, Tensorflow, PyCharm, MATLAB, Linux, Kinect SDK, and GIT.
- **Languages:** Python, C#, C/C++, SQL, Java, PHP

## PROJECTS

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- **Image Synthesis:** Deployed an image synthesis project that converts sketches to color images of different ethnic backgrounds.
- **Bias in Neural Networks:** Developed code to study the disparities between ethnic groups.
- **Multiple Dataset Integration:** Built an integrated database of over 400,00 sketches from CelebA, Fair-Face and LFW datasets to implement a Generative Adversarial Network (GAN) for image synthesis.
- **Adversarial Attack:** Developed an adversarial framework to compromise classification of neural networks
- **Image Quality Enhancement:** Integration of quality maps and attention mechanism to improve adversarial learning.

## EXPERIENCE

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- **Deep Lab** Morgantown  
*Aug. 2018 - Present*  
- Studying disparities between ethnic groups and over a million identities, aimed at reducing bias based learning  
- Data integration of over 400,00 sketches from CelebA, Fair-Face and LFW datasets for sketch to image synthesis.
- **Neuro Lab** Montana  
*Aug. 2017 - July. 2018*  
- Built an image processing framework to track the dynamics of neuron activity in brain vesicles.  
- Implemented Python scripts to analyse data obtained from neuron activity.
- **CompuTech Inc** Lagos  
*May. 2015 - September 2015*  
- Led implementation of a database for a client using My-SQL  
- Provided technical support for both software and hardware related tasks.

## EDUCATION

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- **West Virginia University** Morgantown, WV  
*Aug. 2018 – December 2022 (exptd.)*  
- **Doctor of Philosophy in Electrical Engineering (Deep/Machine Learning)**
- **Montana State University** Morgantown, WV  
*Aug. 2017 – July 2018 (exptd.)*  
- **Graduate Courses (Neuro Engineering)**
- **Obafemi Awolowo University** Ile-Ife, NG  
*Jan. 2013– July. 2015*  
- **Master of Science (Control and Instrumentation Engineering)**

## SELECTED PUBLICATIONS

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- **Osahor, U.M, Dabouei, A., Nasrabadi, N.M:** Ortho-Shot: Low Displacement Rank Regularization with Data Augmentation for Few-Shot Learning (**WACV 2021**), Submitted.
- **Osahor, U.M, Dabouei, A., Nasrabadi, N.M:** Integration of quality maps and attention mechanism to improve adversarial learning (**BMVC 2021**).
- **Osahor, U.M. Kazemi, H., Dabouei, A., Nasrabadi, N.M:** Quality Guided Sketch-to-Photo Image Synthesis, Computer Vision and Pattern Recognition Workshop on Biometrics (**CVPRW**), 16 June, 2020.
- **Osahor, U.M. and Nasrabadi, N.M:** Deep adversarial attack on target detection systems, In Artificial Intelligence and Machine Learning for Multi-Domain Operations Applications (Vol. 11006, p. 110061Q International Society for Optics and Photonics, May 2019.
- **Osahor Uche and Lawrence Kehinde:** Development of a Gesture Detection System for the Control of a Robotic Arm ISSN: 2375-3846, 2016; 3(1): 17-24 published online February 2, 2016.

## LEADERSHIP

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- **Reviewer:** IEEE Transactions, WACV
- **Mentorship:** Mentored minority students for graduate admissions in STEM related fields.