OSAHOR Uche

email : ucheosahor@gmail.com   Mobile : +1-406-580-7304

INTERESTS

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

PROGRAMMING SKILLS

- **Platforms:** PyTorch, Tensorflow, PyCharm, TorchScript, SLAM, Flask, MATLAB, Linux, Kinect-SDK.

- **Languages:** Python, C#, C/C++, SQL, Java, PHP

EDUCATION

- **West Virginia University**   Morgantown, WV
  PhD in Electrical Engineering (*Deep/Machine Learning*)   *Aug. 2018– Present*

- **Obafemi Awolowo University**   Ile-Ife, NG
  Master of Science (*Control and Instrumentation Engineering*)   *Jan. 2013– July. 2015*

- **University of Maiduguri**   Maiduguri, NG
  Bachelor of Science (*Electrical and Electronic Engineering*)   *Jan. 2013– July. 2015*

EXPERIENCE

- **Apple Inc**   Cupertino, California
  Machine Learning Engineering Intern   *Summer 2022 - Present.*
  - Applied deep learning frameworks such as Pytorch with hands on expertise for various data types.
  - Generative adversarial modeling and analysis of Deep generative networks using various statistical techniques/measures.

- **Deep Lab**   Morgantown
  Graduate Research Assistant   *Aug. 2018*
  - 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
  Research Assistant   *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

  System Analyst/Developer — *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.

  - Providing technical support such as hardware/software configurations and troubleshooting - Database Development/Management

- **Monivaya Satellite** — Jos

  Networking Intern — *May. 2009 - September 2011*

  - Deployed company LANs, WANs, routers, switches, and other hardware. - Configured networks to ensure their smooth and reliable operation for fulfilling business objectives and processes.

  - Conducted research on network products, services, protocols, and standards to remain abreast of developments in the networking industry.

PUBLICATIONS

- **Osahor Uche, Dabouei, A., Nasrabadi, N.M**: Ortho-Shot: Low Displacement Rank Regularization with Data Augmentation for Few-Shot Learning (**WACV 2022**).

- **Osahor Uche, Dabouei, A., Nasrabadi, N.M**: Quality map fusion for adversarial learning (**BMVC 2021**).

- **Osahor Uche, 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 Uche 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.

- **Osahor Uche, Igbokwe Joseph, Fayemi Tosin**: Application of Computer Vision Algorithms in the Description of Mitotic Chromosome Metaphase Spread, Research and Reviews: A Journal of Embedded System and Applications (RRJoESA). 2015; 3(1)

- **Osahor Uche, O. Oyedele and D. Ishaya** : Autonomous Navigation of a Robotic Metal Detector, International Journal of Innovation and Scientific Research ISSN 2351-8014 Vol. 9 No. 1 Sep. 2014, pp. 150-155

PROJECTS/EXPERTISE

- **Facial Synthesis**: Deployed an image synthesis project that converts facial sketches to facial RGB images of different ethnic backgrounds..

- **GAN Models**: Implemented various GAN models (STAR, CYCLE, VANILLA, QAGAN, FFGAN, etc) for Quality enhancement, attention and various image synthesis applications.

- **Multiple Dataset Integration**: Collected and annotated of over 400,00 sketches, collated from CelebA, Fair-Face and LFW datasets to implement image synthesis GAN models.
- **Adversarial Attack**: Developed an adversarial framework to compromise classification of neural networks.
- **Image Quality Enhancement**: Improved the perceptual quality of images using Image quality assessment statistics for both Full reference, Supervised and Unsupervised cases.
- **Robotics**: Applied both forward and inverse kinematics for Gesture Control of a robotic Arm.

PROFESSIONAL MEMBERSHIP

- **Institute of Electrical and Electronics Engineers Inc (IEEE) Student**: Member ID: 92691482
- **Society of Photo-Optical Instrumentation Engineers (SPIE)**: Member ID: 4153980
- **National Society of Black Engineers Engineers (NSBE)** : Member ID: 353373

SCIENTIFIC REVIEWER ROLES

- **IEEE Winter Conference on the Applications of Computer Vision** : WACV
- **Institute of Electrical and Electronics Engineers Inc.** : ACCESS

HONOR/AWARDS

- **Scholarship**: PhD Scholarship West Virginia University
- **Research Grant**: CITeR Research Grant

LEADERSHIP/ENGAGEMENT

- **Supervision**: Supervised over 120 undergraduate students in courses related to electrical engineering and Computer Science
- **Mentorship**: Mentored minority students for graduate admissions in STEM related fields.

GRADUATE COURSES

Mathematical Methods in Engineering

Computational Methods and Computers

Advanced Electronics

Digital Electronics

Modern Control Engineering

Instrument Engineering