

School of Electrical Engineering and Computer Science  
Washington State University  
Pullman, WA, USA

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## RESEARCH INTERESTS

Trustworthy Machine Learning (TML), Conformal Prediction, Deep Learning, Multi-target Regression with Representation Learning, Computer Vision, Out-of-Distribution (OOD) Detection, Generative AI.

## RESEARCH SUMMARY

My general research interests are in **Artificial Intelligence (AI)** and **Machine Learning (ML)**, with a main focus on developing robust, safe, and trustworthy ML algorithms for addressing critical real-world challenges within safety-sensitive domains. My current work focuses on developing efficient algorithms and theoretical frameworks to enhance the reliability and **safety of deep learning algorithms**. My research is specifically concentrated on:

- Adapting Uncertainty Quantification methods, like Conformal Prediction, to facilitate effective and secure human-ML collaboration within healthcare applications.
- Trustworthy Out-of-Distribution (OOD) Detection for ensuring the reliability of ML models when applied to real-world tasks beyond their original training scope.

## EDUCATION

**Ph.D., Computer Science** 2022 – Present  
*Washington State University*  
*Pullman, WA, USA*  
*Advisor: Prof. Jana Doppa*

**BS., Statistics** 🎓 (First Class Honors) 2014 – 2018  
*University of Nigeria*  
*Nsukka, Nigeria*  
*Thesis title: Sensitivity of Randomization test and F-test in Some Experimental Designs*  
*Class rank: Best Graduating Student*

## PROFESSIONAL APPOINTMENTS

**Research Assistant** Aug 2022 – Present  
*EECS Department – Washington State University*  
*Pullman, WA, USA*

**Teaching Assistant** Aug 2022 – Present  
*EECS Department – Washington State University*  
*Pullman, WA, USA*  
– CptS 223: Advanced Data Structures C/C++ (Fall-2022)  
– CptS 315: Introduction to Data Mining (Spring-2023)  
– CptS 223: Advanced Data Structures C/C++ (Fall-2023)  
– CptS 315: Introduction to Data Mining (Spring-2024)

**Teaching Assistant** 2019 – 2020  
*Statistics Department – Kano State Polytechnic*  
*Kano, Nigeria*

## AWARDS AND HONORS

🏆 **Outstanding Graduate Teaching Assistant in EECS Award, VCEA** 2024  
*Voiland College of Engineering, Washington State University*

🏆 **EducationUSA Opportunity Fund Program Scholar** 2022  
*USA Embassy, Abuja, Nigeria*

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|----------------------------------------------------------------------------------------------------------------------------|------|
| 🏆 <b>Best Graduating Student</b><br><i>Statistics Department – University of Nigeria</i>                                   | 2018 |
| 🏆 <b>Winner: Nigerian Statistical Association (NSA) competition</b><br><i>Representative of the University of Nigeria.</i> | 2018 |
| 🏆 <b>Gold medalist: NSA competition individual category</b><br><i>Representative of the University of Nigeria.</i>         | 2018 |

## PUBLICATIONS

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### JOURNAL PAPERS

1. Oladugba, A. V., **Chibuiké E. Ugwu**, & Onwuamaeze, U. C. (2023). Sensitivity and robustness of randomization test and F-test in some experimental designs. *Quality and Reliability Engineering International*, 39(7), 2967-2974.

### CONFERENCE PAPERS

1. Oladugba, A. V., **Chibuiké E. Ugwu**, & Onwuamaeze, U. C. (2018). A Comparison of randomization test and F-test in some experimental designs. *Nigerian Statistical Association 42nd Annual National Statistical Association conference, 2018.*