Adekanmi Adeyinka ADEGUN | adegunadekanmi@gmail.com

AI | MACHINE LEARNING | DATA SCIENCE | PROGRAMMING

Summary:
I am committed to translating research into practical solutions with passion for addressing real-world challenges through technological innovation. I have research experience in the development and application of machine learning models in Artificial intelligence areas including Generative AI, Natural language processing and Computer Vision. I am generally versatile with the use of many computer tools and computer applications. I am dedicated to education and mentorship of university students.

SKILLS

Python (NumPy, Pandas, Scikit-learn, Keras, Flask)
SQL (MySQL, Postgres)
Tableau, MS dashboard and reporting tools
MLops, Devops
Keras, Pytorch
NLP
Java, C++
SPSS. MS EXCEL
MongoDb NoSQL

EDUCATION

PhD
Computer Science
University of Kwazulu-Natal, Durban, South Africa.
January 2018 - October 2020

M.Sc.
Computer Science
University of Ibadan, Nigeria
September 2009 - October 2011

B.Sc.
Computer Science
LAUTECH, Nigeria
September 2001 - April 2007

CERTIFICATIONS
ORACLE
DATA SCIENCE

WORK EXPERIENCE

Researcher/ Lecturer | University of Roehampton |January 2024 - Current / London, United Kingdom

My roles in this University include:

- Conducting research in AI and Data Science related areas developing Machine learning models.
- Mentoring and Supervising Undergraduate and Postgraduate research AI projects.
- Facilitating and writing grants and funding application for deep learning based medical images analysis, AI safety and Governance.
- Teaching undergraduate courses like Computing fundamentals, C++ programming and Computer Algorithms

Post-Doc Research Associate | University of Kwazulu-Natal |January 2021 –December 2023/ South Africa

My role in this University was to conduct research and provide supervision to students. Specifically, I took part in:

- Designing and modelling deep learning systems for medical images analysis towards skin cancer and brain tumor detection.
- Developing explainable deep learning models for detecting respiratory related diseases using x-ray images.
- Developing Deep learning models for high resolution satellite imagery analysis.
- Supervising projects in machine learning application for scene classification and object detection using YOLO and R-CNN models.
- Deep learning model development for flood detection in Kwazulu-Natal area, South Africa using satellite image analysis.
- Mentoring B.Sc. Honors and M.Sc. students in developing machine learning projects.

Lecturer | Landmark University Nigeria |April 2013-December 2020
My roles included conducting research and lectures for undergraduate students. I was also involved in curriculum development, creating and improving educational content for courses and programs.
I provided mentorship and supervision to both Undergraduate and M.Sc. students' projects, and teaching undergraduate courses including:

- Analysis of Algorithms (CSC 413)
- Artificial Intelligence (CSC 415)

- Software Development (CSC 417)
- Neural Network (CSC 416)
- Net- Centric Computing (CSC 430)
- Computer Networking and Security (CSC 424)
- Survey of Programming Languages (CSC 319)
- Computer Programming III (Object Oriented Programming Approach IN JAVA)
- Database Management and Design (SQL and NoSQL) (CSC 214)

IT Director/Data Scientist |Achievers InfoTech Ltd |April 2009 - April 2013 / Nigeria

- Software Development using Java, C#
- Developed various database applications in MySQL, MSSQL and Oracle
- Database administrator tasks and training using Oracle Database
- Various software and applications development
- Data Analysis using SPSS and Microsoft Excel , Web design and development PHP

RESEARCH PUBLICATION –

My published articles include:

• Akinpelu, Samson, Serestina Viriri, and Adekanmi Adegun. "An enhanced speech emotion recognition using vision transformer." *Scientific Reports* 14, no. 1 (2024): 13126.

• Adegun, Adekanmi Adeyinka, Jean Vincent Fonou-Dombeu, Serestina Viriri, and John Odindi. "Ontology-Based Deep Learning Model for Object Detection and Image Classification in Smart City Concepts." *Smart Cities* 7, no. 4 (2024): 2182-2207.

• Adegun, Adekanmi, Serestina Viriri, and Jules-Raymond Tapamo. "Automated classification of remote sensing satellite images using deep learning based vision transformer." Applied Intelligence (2024): 1-20.

• Adegun, Adekanmi Adeyinka, Jean Vincent Fonou Dombeu, Serestina Viriri, and John Odindi. "State-of-the-Art Deep Learning Methods for Objects Detection in Remote Sensing Satellite Images." Sensors 23, no. 13 (2023): 5849.

• Adegun, Adekanmi Adeyinka, Serestina Viriri, and Jules-Raymond Tapamo. "Review of deep learning methods for remote sensing satellite images classification: experimental survey and comparative analysis." Journal of Big Data 10, no. 1 (2023): 93.

•Akinpelu, Samson, Serestina Viriri, and Adekanmi Adegun. "Lightweight Deep Learning Framework for Speech Emotion Recognition." IEEE Access (2023).

• Thwala, E. K. I., A. A. Adegun, and M. O. Adigun. "Self-Assessment Chatbot for COVID-19 prognosis using Deep Learning-based Natural Language Processing (NLP)." In 2023 International Conference on Science, Engineering and Business for Sustainable Development Goals (SEB-SDG), vol. 1, pp. 1-8. IEEE, 2023.

• Mkhwanazi, P. T., A. Adegun, and M. O. Adigun. "Deep Learning-Based Digital Assistant for Farmers in South Africa." In 2023 International Conference on Science, Engineering and Business for Sustainable Development Goals (SEB-SDG), vol. 1, pp. 1-4. IEEE, 2023.

• Adekanmi Adegun, Serestina Viriri and Jules-Raymond Tapamo , “ Light-weight Deep Learning Framework for Automated Remote Sensing Images Classification”, Lecture Notes of Computer Science, Springer The 2nd Pan-African Artificial Intelligence and Smart Systems Conference, 2022

• Oluwatobi NoahAkande, Hakeem Babalola Akande, Aderonke Anthonia Kayode, Adegun Adekanmi Adeyinka, Folorunsho Olaiya, Gbenle Oluwadara “Development of a Real Time Smishing Detection Mobile Application using Rule Based Techniques” Procedia Computer Science Volume 199, 2022, Pages 95-102

• Oruh, J., Viriri, S., Adegun, A. “Long Short-Term Memory Recurrent Neural Network for Automatic Speech Recognition” IEEE Access 2022, 10, pp. 30069–30079

• Adegun, Adekanmi Adeyinka, Serestina Viriri, and Roseline Oluwaseun Ogundokun. "Deep learning approach for medical image analysis." Computational Intelligence and Neuroscience 2021 (2021): 1-9.

• Adegun, A. A., Viriri, S., & Yousaf, M. H. (2021). A Probabilistic-Based Deep Learning Model for Skin Lesion Segmentation. Applied Sciences, 11(7), 3025.

• Adegun, Adekanmi A., and Serestina Viriri. "FCN-Based DenseNet Framework for Automated Detection and Classification of Skin Lesions in Dermoscopy Images." IEEE Access 8 (2020): 150377-150396.

• Adegun, Adekanmi, and Serestina Viriri. "Deep learning techniques for skin lesion analysis and melanoma cancer detection: a survey of state-of-the-art." Artificial Intelligence Review (2020): 1-31.

• Adegun, Adekanmi, and Serestina Viriri. "Deep Convolutional Network-Based Framework for Melanoma Lesion Detection and Segmentation." In International Conference on Advanced Concepts for Intelligent Vision Systems, pp. 51-62. Springer, Cham, 2020.

• Adegun, Adekanmi A., and Serestina Viriri. "Deep Learning-Based System for Automatic Melanoma Detection." IEEE Access 8 (2019): 7160-7172.

• Salih, Omran, Serestina Viriri, and Adekanmi Adegun. "Skin Lesion Segmentation Based on Region-Edge Markov Random Field." In International Symposium on Visual Computing, pp. 407-418. Springer, Cham, 2019.

• Kayode, Aderonke Anthonia, Noah Oluwatobi Akande, Adekanmi Adeyinka Adegun, and Marion Olubunmi Adebiyi. "An automated mammogram classification system using modified support vector machine." Medical Devices (Auckland, NZ) 12 (2019): 275.

• Adegun, Adekanmi, and Serestina Viriri. "An enhanced deep learning framework for skin lesions segmentation." In International Conference on Computational Collective Intelligence, pp. 414-425. Springer, Cham, 2019.

• Adegun, Adekanmi, and Serestina Viriri. "Fully Convolutional Encoder-Decoder Architecture (FCEDA) for Skin Lesions Segmentation." In International Conference on Computational Collective Intelligence, pp. 426-437. Springer, Cham, 2019.

- Adegun, Adekanmi, and Serestina Viriri. "Deep Learning Model for Skin Lesion Segmentation: Fully Convolutional Network." In International Conference on Image Analysis and Recognition, pp. 232-242. Springer, Cham, 2019.

- Adeyinka, Adegun Adekanmi, Marion Olubunmi Adebiyi, Noah Oluwatobi Akande, Roseline Oluwaseun Ogundokun, Anthonia Aderonke Kayode, and Tinuke Omolewa Oladele. "A Deep Convolutional Encoder-Decoder Architecture for Retinal Blood Vessels Segmentation." In International Conference on Computational Science and Its Applications, pp. 180-189. Springer, Cham, 2019.

- Adebiyi, Marion, Bolaji Famuyiwa, Abayomi Mosaku, Roseline Ogundokun, Olaolu Arowolo, Noah Akande, Adekanmi Adegun, Aderonke Kayode, Ayodele Adebiyi, and Ezekiel Adebiyi. "Computational Investigation of Consistency and Performance of the Biochemical Network of the Malaria Parasite, Plasmodium falciparum." In International Conference on Computational Science and Its Applications, pp. 231-241. Springer, Cham, 2019.
- A. A. Adegun, E.O. Asani, R. O. Ogundokun & N. O. Akande .(2018)Image Segmentation And Classification of Large Scale Satellite Imagery for Land Use: A review of the state of the arts .International Journal of Civil Engineering and Technology (IJCIET), Volume 9, Issue 11, (November 2018) [Scopus-indexed] Published

- Adeyinka, Adegun Adekanmi, and Serestina Viriri. "Skin lesion images segmentation: A survey of the state-of-the-art." In International Conference on Mining Intelligence and Knowledge Exploration, pp. 321-330. Springer, Cham, 2018.

- Oladele, Tinuke O., Roseline Oluwaseun Ogundokun, Aderonke Anthonia Kayode, Adekanmi Adeyinka Adegun, and Marion Oluwabunmi Adebiyi. "Application of Data Mining Algorithms for Feature Selection and Prediction of Diabetic Retinopathy." In International Conference on Computational Science and Its Applications, pp. 716-730. Springer, Cham, 2019.

- Akande, Noah Oluwatobi, Christiana Oluwakemi Abikoye, Marion Olubunmi Adebiyi, Anthonia Aderonke Kayode, Adekanmi Adeyinka Adegun, and Roseline Oluwaseun Ogundokun. "Electronic Medical Information Encryption Using Modified Blowfish Algorithm." In International Conference on Computational Science and Its Applications, pp. 166-179. Springer, Cham, 2019.

- Adenike Oluyemi Bello, Adekanmi Adeyinka Adegun, Sunday Chinedu Eze, Monisola Esther Alao & Babatunde Gbadamosi. (2018) Supply Chain Management: Risk Assessment In Automotive Industry Using Fuzzy-AHP Model. International Journal of Mechanical Engineering and Technology (IJMET), Volume 9, Issue 11, (November 2018)

- Adegun, Adekanmi Adeyinka, Roseline Oluwaseun Ogundokun, Samuel Ogbonyomi, and Peter O. Sadiku. "Design and Implementation of an Intelligent Gaming Agent Using A* Algorithm and Finite State Machines."

- Ogundokun RO, Adebiyi MO, Abikoye OC, Tinuke O. Oladele, Adewale F. Lukman, Abidemi E. Adeniyi, Adekanmi A. Adegun, Babatunde Gbadamosi, Noah O. Akande Evaluation of the scholastic performance of students in 12 programs from a private university in the south-west geopolitical zone in Nigeria F1000Research 2019, 8:154 (https://doi.org/10.12688/f1000research.16762.1)