Olutomilayo Olayemi Petinrin

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Skills

Programming	Python, R, Javascript, C++, LaTeX
Frameworks	Scikit, TensorFlow, Keras
Platforms	Web, Windows, JASP, WEKA, Matlab
Soft Skills	leadership, management, scientific and professional communication, team building
Communication	English (professional), Yoruba (native), French (basic)
Interests	cycling, swimming, hiking, badminton, table tennis

Education

Doctor of Philosophy - Computer Science; GPA: 3.65/4 **Sept 2019 - Aug 2023**
City University of Hong Kong (CityU)

Relevant courses: Data Mining and Warehousing, Machine learning: Application, Optimization and Complexity theory, Research Methodology.

Master of Computer Science; GPA: 3.95/4 **Aug 2016 - Dec 2017**
Universiti Teknologi Malaysia (UTM)

Relevant courses: Data Structure and Algorithms, Theory of Computer Science, Computer System and Architecture, Data Mining.

Bachelor of Science - Computer Science; GPA: 4.53/5 **Sept 2009 - Dec 2014**
Ekiti State University, Ado-Ekiti (EKSU)

Relevant courses: Numerical Analysis, Artificial Intelligence, Structured Programming, Application Software Development.

Work Experience

Visiting Research Scholar **Sept 2022 - Feb 2023**
Cornell University *Ithaca, NY, USA*

- I am currently working on the development of machine learning methods for Cancer and Tuberculosis patient classification based on genomics and metabolomics data sets.
- I am currently working on a time series data for sleep pattern analysis.
- I use JASP and R for statistical analysis.

Teaching Assistant **Sept 2019 - Aug 2023**
City University of Hong Kong *Hong Kong*

- I was in charge of labwork for the following courses: Data-Intensive Computing, Big data Algorithm & Technique, and Introduction to Computer Programming.
- I was a tutor for Introduction to Computer Science for four semesters.
- I prepared lab materials, graded tests and assignments, and attended to students' questions.

Lecturer **Mar 2018 - Aug 2019**
Kings University *Odeomu, Nigeria*

- I taught the following courses: Fundamentals of Data Structure & Algorithms, Computer Networks, and Object-Oriented Programming.
- I developed mid-semester quizzes, homework, and exams.
- I coordinated grading and labwork.
- I supervised two student projects.

System Analyst **May 2015 - Apr 2016**
National Institute for Educational Planning and Administration *Ondo, Nigeria*

- traced and restored network disconnections in the different parastatals of the Institute.
- I tutored university interns on practical networking and web development skills.
- I was a member of the networking team that set up a computer-based test facility for almost 1000 students.

Intern **Aug 2012 - Feb 2013**
Bureau of Computer Services and Information Technology, Office of the Governor *Osogbo, Nigeria*

- I monitored the Network Operating Center (NOC) of the State. I also traced connection loss and facilitated its restoration.
- I was responsible for constant network connection in all office ministries.
- I tutored college students on basic computer skills.

Honors and Awards

Outstanding Academic Performance Award **2022**
City University of Hong Kong.

Research Tuition Scholarship **2020**
City University of Hong Kong.

Postgraduate Studentship Award **2019 - 2023**
City University of Hong Kong.

Best Student Award **2018**
Faculty of Computing, Universiti Teknologi Malaysia.

MTN Foundation Scholarship Award for Science Students **2012 - 2014**
MTN Nigeria.

University Scholarship Award **2011**
Ekiti State University Ado-Ekiti.

Publication

Petinrin, Olutomilayo Olayemi, Faisal Saeed, Xiangtao Li, Fahad Ghabban, and Ka-Chun Wong (2022). "Reactions' descriptors selection and yield estimation using metaheuristic algorithms and voting ensemble". In: *Computers, Materials and Continua* 70.3, pp. 4745–4762.

Liu, Zhe, Xudong Liu, Fang Liu, Hui Zhao, Yu Zhang, Yafan Wang, Ying Ma, Fuzhou Wang, Weitong Zhang, Olutomilayo Olayemi Petinrin, et al. (2022). "The comprehensive and systematic identification of BLCA-specific SF-regulated, survival-related AS events". In: *Gene* 835, p. 146657.

Petinrin, Olutomilayo Olayemi, Xiangtao Li, and Ka-Chun Wong (2021). "Particle Swarm Optimized Gaussian Process Classifier for Treatment Discontinuation Prediction in Multicohort Metastatic Castration-Resistant Prostate Cancer Patients". In: *IEEE Journal of Biomedical and Health Informatics* 26.3, pp. 1309–1317.

Liu, Linjing, Xingjian Chen, Olutomilayo Olayemi Petinrin, Weitong Zhang, Saifur Rahaman, Zhi-Ri Tang, and Ka-Chun Wong (2021). "Machine learning protocols in early cancer detection based on liquid biopsy: a survey". In: *Life* 11.7, p. 638.

Ogunsina, Adeseye Amos, Moses Omolayo Petinrin, Olutomilayo Olayemi Petinrin, Emeka Nelson Offornedo, Joseph Olawole Petinrin, and Gideon Olusola Asaolu (2021). "Optimal distributed generation location and sizing for loss minimization and voltage profile optimization using ant colony algorithm". In: *SN Applied Sciences* 3.2, pp. 1–10.

Petinrin, Olutomilayo Olayemi and Ka-Chun Wong (2021). "Protocol for epistasis detection with machine learning using genepi package". In: *Epistasis*. Springer, pp. 291–305.

Aghimien, Emmanuel Imuetinyan, Lerato Millicent Aghimien, Olutomilayo Olayemi Petinrin, and Douglas Omoregie Aghimien (2020). "High-performance computing for computational modelling in built environment-related studies–a scientometric review". In: *Journal of Engineering, Design and Technology*.

Petinrin, Olutomilayo Olayemi and Faisal Saeed (2019). "Stacked ensemble for bioactive molecule prediction". In: *IEEE Access* 7, pp. 153952–153957.

Hameed, Shilan S, Olutomilayo Olayemi Petinrin, Abdirahman Osman Hashi, and Faisal Saeed (2018). "Filter-wrapper combination and embedded feature selection for gene expression data". In: *Int. J. Advance Soft Compu. Appl* 10.1, pp. 90–105.

Afolabi, Lateefat Temitope, Faisal Saeed, Haslinda Hashim, and Olutomilayo Olayemi Petinrin (2018). "Ensemble learning method for the prediction of new bioactive molecules". In: *PloS one* 13.1, e0189538.

Petinrin, Olutomilayo Olayemi and Faisal Saeed (2018). "Bioactive molecule prediction using majority voting-based ensemble method". In: *Journal of Intelligent & Fuzzy Systems* 35.1, pp. 383–392.

Petinrin, Olutomilayo Olayemi, Faisal Saeed, and Tawfik Al-Hadhrami (2017). "Voting-based ensemble method for prediction of bioactive molecules". In: *2017 2nd International Conference on Knowledge Engineering and Applications (ICKEA)*. IEEE, pp. 118–122.

Muniru, Idris O, Nalweyiso Shifulah, Oluwatomilayo O Petinrin, and Nugraha P Utama (2017). "A Digital Technology Framework for Promoting Nutritional/Health Benefits of West African Diet". In: *2017 3rd International Conference on Science, Engineering, and the Social Sciences (ICSESS)* 29, p. 201.

Petinrin, Olutomilayo Olayemi and Kemi Olatunbosun (2017). "Application of machine learning in prediction of bioactivity of molecular compounds: A review". In: *Technology (ICONSEET)* 2.2, pp. 9–15.

Olatunbosun, Kemi and Olutomilayo Olayemi Petinrin (2017). "Expert System for Diagnosis of Malaria and Typhoid Fever". In: *Technology (ICONSEET)* 2.44, pp. 341–346.

Project

Determination of Treatment Discontinuation in Cancer Patients **Aug 2021**
Published Paper

- To prevent the possibility of adverse reaction based on treatment method, I optimized machine learning algorithm using a metaheuristic algorithm.
- The model discontinued wrong treatment of 15 out of 104 patients compared to 10 discontinuation in previous publications.

Bioactive Molecular Compound Prediction using Stacking and Voting ensemble **Oct 2017**
Masters Thesis

- Using three datasets, I implemented classic machine learning methods for the prediction of the bioactivity of molecular compounds towards drug-target analysis.
- I further implemented ensemble methods such as voting and stacked generalization to improve performance of the models. Parameter tuning was utilized for all analysis.

Facial Recognition Using Artificial Neural Network and Feature Selection **Dec 2014**
Bachelor's Thesis

- I used Gabor filter for texture analysis.
- I implemented feature extraction and recognition of faces with ANN using Matlab.

Professional Training

AWS Machine Learning Foundations 2022 **2022**
Udacity

Machine Learning A-Z™: Hands-On Python & R in Data Science **Oct 21, 2021**
Udemy

ICSI | CNSS Certified Network Security Specialist **July 2020**
International Cybersecurity Institute

Data Analytics using RapidMiner **2017**
Faculty of Computing, Universiti Teknologi Malaysia.

Participant **2017**
3rd International Conference on Science, Engineering, and the Social Sciences (ICSESS 2017)

Mendeley Workshop **2016**
Faculty of Computing, Universiti Teknologi Malaysia

Professional Affiliation

Associate Member, Hong Kong Computer Society (HKCS) **2021 - Present**
Member ID: A30198

Member, Organization for Women in Science for the Developing World (OWSD) **2018 - Present**
Member ID: 7310

Member, National Association of Science Students (NASS) **2010 - 2014**

Member, National Association of Computer Science Students (NACOSS) **2010 - 2014**

Professional Service

International Program Committee Member **2021**
5th International Conference on Intelligent Systems, Metaheuristics & Swarm Intelligence (ISMSI 2021)

Program Committee Member **2021**
28th International Conference on Neural Information Processing (ICONIP 2021)

Program Committee Member **2020**
27th International Conference on Neural Information Processing (ICONIP 2020)

RapidMiner Facilitator **2017**
Faculty of Computing, UTM

Central Working Committee Member **2017**
3rd International Conference on Science, Engineering, and the Social Sciences (ICSESS 2017)

Organizing Committee Member **2017**
2nd International Conference of Reliable Information and Communication Technology 2017 (IRICT 2017)

Peer-Reviewed Articles for:
- IEEE Journal of Biomedical and Health Informatics
- BioData Mining
- Computer Modeling in Engineering & Sciences
- Applied Soft Computing
- Frontiers in Genetics, Frontiers in Bioengineering and Biotechnology and Frontiers in Plant Science (Computational Genomics)
- CMC-Computers, Materials & Continua
- ICONIP 2020, 2021, 2022
- ICSMI 2021, 2022

Community Service

Research Education Committee, Department of Computer Science, CityU **Sept 2021 – Aug 2023**
Member

Association of Nigerian Scholars in Hong Kong (ANSHK) **Oct 2021 – Sept 2023**
Member

Navigating Hong Kong, ANSHK **2020**
Guest Speaker

Electoral Committee, ANSHK **2020**
Member

Electoral Committee, International Student Society (ISS-NIGERIA), UTM **2017**
Member

Annual General Meeting (AGM) Committee, ISS-NIGERIA, UTM **2017**
Member

Information Communication Technology, Community Development Service Group. Ondo State. **2015 - 2016**
Project Coordinator

Joint Admissions and Matriculation Board **2016**
Proctor

Deeper Life Campus Fellowship **2011 - 2012**
Academic Director

Referee

Dr. Ka-Chun Wong
Associate Professor,
Department of Computer Science,
City University of Hong Kong.
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