Olutomilayo Olayemi Petinrin

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Professional Summary

I am a goal-oriented data scientist with over six years of experience in telling insightful stories with data. I am particularly drawn to high-impact fields of data science, such as health and business analytics. Data is ubiquitous, and the methods of ploughing through it are numerous and ever-evolving. This presents a challenge that I embrace with excitement, both as a daily task and as a commitment to be on the cutting edge of the field. I am a happy learner, a keen observer and a firm believer that everything I do must be geared towards growth, contribution and impact.

Education

- **City University of Hong Kong, (CityU)** — Kowloon, Hong Kong
  Doctor of Philosophy - Computer Science; GPA: 3.65/4.3 — *Sept 2019 - Aug 2023*
  Courses: *Data Mining and Warehousing, Machine learning: Application, Optimization and Complexity theory, Research Methodology*

- **Universiti Teknologi Malaysia** — Skudai, Malaysia
  Master of Computer Science; GPA: 3.95/4 — *Aug 2016 - Dec 2017*
  Courses: *Data Structure and Algorithms, Theory of Computer Science, Computer System and Architecture, Data Mining*

- **Ekiti State University** — Ado-Ekiti, Nigeria
  Bachelor of Science - Computer Science; GPA: 4.53/5 — *Sept 2009 - Dec 2014*
  Relevant Courses: *Numerical Analysis, Artificial Intelligence, Structured Programming, Application Software Development*

Skills Summary

- **Languages**: Python, SQL, R, JavaScript, C++
- **Frameworks**: Scikit, TensorFlow, Keras
- **Soft Skills**: leadership, event management, communication for scientific and professional purposes, team building
- **Communication**: English (professional), Yoruba (native), French (basic)
- **Interests**: cycling, swimming, hiking, badminton, table tennis

Experience

- **Cornell University** — Ithaca, NY, USA
  Visiting Research Scholar — *Sept 2022 - Feb 2023*
  - I worked on the development of machine learning methods for Cancer and Tuberculosis patient classification based on genomics and metabolomics data sets.
  - I worked on a time series ambulatory blood pressure data for sleep pattern detection.

- **CORIL Lab, City University of Hong Kong** — Hong Kong
  Machine Learning Researcher — *Sept 2019 - Aug 2023*
  - I applied machine learning and deep learning for predictive analysis and modelling for solution and insights.
  - I was in charge of labwork for the following courses: Data-Intensive Computing, Big data Algorithm & Technique, Introduction to Computer Programming, and Introduction to Computer Science.

- **Kings University** — Odeomu, Nigeria
  Lecturer — *Mar 2018 - Aug 2019*
  - I taught the following courses to over **50** students: Fundamentals of Data Structure & Algorithms, Computer Networks, and Object-Oriented Programming. I also supervised **2** student projects.

- **National Institute for Educational Planning and Administration** — Ondo, Nigeria
  System Analyst — *May 2015 - Apr 2016*
  - I traced and restored network disconnections in about **20** parastatals of the Institute.
  - I tutored over **10** 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.

- **Bureau of Computer Services and Information Technology, Office of the Governor.** — Osogbo, Nigeria
  Intern — *Aug 2012 - Feb 2013*
  - I monitored the Network Operating Center (NOC) of the State. I also traced connection loss and facilitated its restoration for constant network connection in all office buildings.

Projects

- **Sleep pattern detection from ambulatory blood pressure data** Nov 2022
  Collaboration with Weill Medical College
  - I worked on data cleaning and visualization for time series blood pressure data for over 300 participants.
  - Worked on feature extraction from the data, for further analysis with machine learning algorithms, and detection of sleeping irregularities.
- **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 Machine Learning 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.

Honors and Awards

- Outstanding Academic Performance Award, City University of Hong Kong: 2022
- Research Tuition Scholarship, City University of Hong Kong: 2020
- UGC-funded Postgraduate Studentship Award, City University of Hong Kong: 2019 - 2023
- Best Student Award, Faculty of Computing, Universiti Teknologi Malaysia: April 2018
- MTN Foundation Scholarship Award for Science Students: 2012 - 2014
- University Scholarship Award for first class students: 2011

Professional Training

- **AWS Machine Learning Foundations (Gold Badge Winner)**
  Udacity *Nov 2022*
- **Machine Learning A-Z™: Hands-On Python & R in Data Science**
  Udemy *Oct 2021*
- **ICSI — CNSS Certified Network Security Specialist**
  International Cybersecurity Institute *Jul 2020*

Publications

- **Book Chapter**: **Petinrin, O. O.**, & Wong, K. C. (2021). Protocol for Epistasis Detection with Machine Learning Using GenEpi Package. In Epistasis (pp. 291-305). Humana, New York, NY.
- **Journal**: **Petinrin, O. O.**, Li, X., & Wong, K. C. (2021). Particle Swarm Optimized Gaussian Process Classifier for Treatment Discontinuation Prediction in Multicohort Metastatic Castration-Resistant Prostate Cancer Patients. IEEE Journal of Biomedical and Health Informatics.
- **Journal**: Liu, L., Chen, X., **Petinrin, O. O.**, Zhang, W., Rahaman, S., Tang, Z. R., & Wong, K. C. (2021). Machine Learning Protocols in Early Cancer Detection Based on Liquid Biopsy: A Survey. Life, 11(7), 638.
- **Journal**: **Petinrin, O. O.**, & Saeed, F. (2019). Stacked ensemble for bioactive molecule prediction. IEEE Access, 7, 153952-153957.
- **Journal**: Hameed, S. S., **Petinrin, O. O.**, Osman, A., & Hashi, F. S. (2018). Filter-wrapper combination and embedded feature selection for gene expression data. Int. J. Advance Soft Compu. Appl, 10(1), 90-105.
- **Conference**: **Petinrin, O. O.**, Saeed, F., & Al-Hadhrami, T. (2017, October). Voting-based ensemble method for prediction of bioactive molecules. In 2017 2nd International Conference on Knowledge Engineering and Applications (ICKEA) (pp. 118-122). IEEE.

Professional Affiliation

- **Hong Kong Computer Society (HKCS),** Member ID: A30198
  Associate Member *2021 - Present*
- **Organization for Women in Science for the Developing World (OWSD)** Member ID: 7310
  Member *2018 - Present*

Leadership and Volunteer Experience

- **Research Education Committee, Dept. of Computer Science, CityU** Hong Kong
  Member *Sept 2021 - Aug 2023*
- **Association of Nigerian Scholars in Hong Kong (ANSHK)** Hong Kong
  First female Secretary *Oct 2021 - Sept 2023*
- **Navigating Hong Kong, ANSHK** Hong Kong
  Guest Speaker *2020*
- **Information Communication and Technology Community Development Service Group** Ondo, Nigeria
  Project Coordinator *2015 - 2016*