BOLU OLUWALADE

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SUMMARY

A seasoned professional with a robust background in healthcare operations and advanced data analytics. Proven track record in clinical laboratory science, research, healthcare data analytics, quality improvement, and leveraging cutting-edge analytics to drive data-driven decisions and optimize healthcare outcomes.

PROFESSIONAL EXPERIENCE

Data Programmer Analyst, The Children's Hospital of Philadelphia, Philadelphia, PA
November 2021 - Present

- Partnered with quality improvement advisors and clinicians to design and implement Plan-Do-Study-Act (PDSA) cycles and Statistical Process Control (SPC) charts to reduce the overuse of inhaled medications. This initiative resulted in a 50% reduction in hypertonic saline treatment duration and a 40% decrease in albuterol Q4 frequency.
- Collaborated with clinical and operations teams to develop custom ETL processes for Trusted Data Layer (TDL) models from EHR data, integrating subject matter experts' validation to ensure consistent, accurate, and efficient reporting.
- Developed comprehensive solutions, including tables, dashboards, and reports, based on clinical stakeholders' defined cohorts and metrics to support improved Neonatal care.

Data Analyst, The Family Institute at Northwestern University, Evanston, IL
August 2021 - November 2021

- Developed dynamic dashboards using Python and PowerBI to drive strategic decision-making.
- Ensured data quality and accuracy for organization-wide reports.

Data Analyst, Indiana Department of Health (IDOH) - Indianapolis, IN
July 2020 – November 2021

- Contributed significantly to a team effort to design and implement a web-based reporting system for COVID-19 lab reports, reducing processing time from 3 days to less than 24 hours.
- Created interactive dashboards using SQL, Tableau, and R for guiding decision-making.
- Developed a dashboard that tracts COVID-19 testing kit utilization in K1-12 schools and care facilities at the Indiana state level.
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Software Developer Intern, Google Summer of Code - Remote
June 2020 - August 2020

- Selected as one of the 1,198 out of 51,244 applicants for the 2020 Google Summer of Code to develop innovative open-source solutions.
- Contributed to the LibreHealth open-source Electronic Health Records System development by creating front-end web components for Fast Healthcare Interoperability Resources (FHIR) using JS, HTML, CSS, and Lit Elements.

Graduate Research Assistant, Purkayastha Lab for Health Innovation, SOIC, IUPUI
January 2019 - May 2020

- Built deep learning models for human activity recognition based on accelerometer and gyroscope data from smartwatches and smartphones using R libraries. Obtained a classification precision of more than 90% for all the activities.
- Prepared and formatted drafts of research findings for review by the Principal Investigator and eventual journal publication.

Data Analyst, Indiana University Center for Health Innovation and Implementation Science
May 2019 - December. 2019

- Collaborated with a senior biostatistician and a data analytics specialist to analyze Clinical Quality Measures (CQM) data from over 11,000 clinicians across five states, focusing on aligning practices with the CMS's quadruple aim of better care, improved outcomes, lower costs, and enhanced patient and clinician experiences.

Medical Laboratory Scientist, Garki Hospital Abuja, Nigeria
May 2016 - June 2018

- Performed hematological and clinical chemistry analysis on various tissue and blood samples using Cobas chemistry analyzers (c311, e411), Sysmex hematology analyzers, Partec Cyflow CD4 analyzers, and other tools.

- Leveraged the EHR systems and healthcare standards including SNOMED, and LOINC Codes to manage patients' laboratory results.

SKILLS

- **Advanced Programming and Scripting languages:** R, Python, SQL
- **Data Analytics:** Exploratory Data Analysis, Statistical Inference, Dashboard Development
- **Data Engineering**: Airflow, DBT
- **Cloud Services**: Amazon Web Services, Snowflake, Databricks
- **Machine Learning and Artificial Intelligence (AI)**: Classification and Regression Models, Deep Learning Algorithms
- **Databases:** Oracle, Postgres, Microsoft SQL Server, BigQuery
- **Research**: Qualitative and Quantitative research methods, Scientific Writing
- **Software/Tools:** RMarkdown, RStudio, Jupyter, VS Code, REDCap, Qlik Sense, Tableau, PowerBI, Jira
- **Version control/Documentation:** GitHub, GitLab, Code Review
- **Healthcare Standards/Terminologies:** OMOP, SNOMED CT, LOINC, ICD/CPT, HL7, FHIR

EDUCATION

- **Master of Science in Health Informatics,** May 2020
  - *Indiana University - Purdue University Indianapolis (IUPUI)*
- **Bachelor of Science in Medical Laboratory Science,** June 2014
  - *Babcock University - Ilishan Remo, Nigeria*

CERTIFICATIONS

- Building FHIR Applications | **July 2024**
- Epic Clinical Data Model | **Dec 2023**
- Machine Learning Specialization | **Oct 2023**
- AWS Certified Cloud Practitioner | **Nov 2022**
- EPIC Caboodle, Clarity, Cogito Data Model | **May 2022**
- Google Data Analytics Professional Certificate | **June 2021**
- Tableau Analyst | **June 2020**

RESEARCH PUBLICATIONS

- Mercado, O., Ruan, A., **Oluwalade, B.,** Devine, M., Gibbs, K., & Carr, L. (2024). Leveraging Novel Clinical Decision Support to Improve Preferred Language Documentation in a Neonatal Intensive Care Unit. *Applied Clinical Informatics*.
- Carr, L. H., **Oluwalade, B.,** Muthu, N., Beus, J., & Bonafide, C. P. (2023). Between-hospital variation in clinical decision support availability for common inpatient pediatric conditions: Results of a national Pediatric Research in Inpatient Settings (PRĪS) Network survey. Journal of Hospital Medicine.
- **Oluwalade, B.,** Neela, S., Wawira, J., Adejumo, T., & Purkayastha, S. (2021). Human activity recognition using deep learning models on smartphones and smartwatches sensor data. *arXiv preprint arXiv:2103.03836*.
- Purkayastha, S., Goyal, S., **Oluwalade, B.,** Phillips, T., Wu, H., & Zou, X. (2021). Usability and security of different authentication methods for an electronic health records system. arXiv preprint arXiv:2102.11849.
- Bhimireddy, A., Sinha, P., **Oluwalade, B.,** Gichoya, J. W., & Purkayastha, S. (2020). Blood glucose level prediction as time-series modeling using sequence-to-sequence neural networks. CEUR Workshop Proceedings.
- **Oluwalade B,** Apte S, Purkayastha S Building a Composable Electronic Health Records System using Fast Healthcare Interoperability Resources (FHIR) web components. DOI: 10.2196/preprints.29674

MEMBERSHIP

- Community Member, OHDSI | **May 2023 - Present**
- Member of the Healthcare Information and Management Systems Society (HIMSS) | **Jan 2020 - Present**

INTERESTS

- Soccer, Reading, Traveling