

## **IAN ZABLON OWUOR.**

**Graduate Industrial Chemistry | Graduate Research Assistant | Science Data Analyst.**

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### **CAREER SUMMARY.**

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Industrial Chemist with experience in the manufacturing industry. Skilled in laboratory techniques such as Spectroscopy, Chromatography, and Synthesis for analysis. Strong understanding of chemical principles and regulations. Experience in process optimization, troubleshooting, and project management. Proven track record of reducing defects and improving customer satisfaction through effective quality assurance processes and practices. A team player with excellent communication and problem-solving skills. Holds a bachelor's degree in industrial chemistry from Masinde Muliro University of Science and Technology. Proficient in various scientific software and equipment for statistical analysis including R-programming Language, SQL, Tableau and Microsoft Office Suite. Experience with developing and implementing compliance strategies. Strong understanding of safety protocols and procedures in the laboratory including ISO 9001 and CMMI. Strong analytical skills and ability to interpret data. Proven track record of successful projects.

### **EDUCATION.**

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**Bachelor of Science - Industrial Chemistry.**

**Awarded August 2021.**

Masinde Muliro University of Science and Technology, Kakamega Kenya.

CGPA: 3.01/4

Undergraduate Thesis: *"Effects of sodium metabisulfite preservative levels on meat and meat products in Kakamega Region by the use of UV-Vis and the Monier-Williams experiment."*

**Supervisor: Dr. Bernard Omogo.**

### **RESEARCH INTEREST.**

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- Inorganic Chemistry.
- Mass Spectrometry.
- Analytical Spectroscopy.
- Electrochemistry.

- Separation Science.
- Data Analysis.

## **RESEARCH EXPERIENCE.**

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**Undergraduate Research Assistant.**

**March 2020 - Feb 2021.**

Chemistry Research Laboratory, Masinde Muliro University of Science and Technology.

Supervisor: Dr. Bernard Omogo.

- Collaborated with my supervisor, Dr. Bernard Omogo, to design experiments and research projects.
- Developed hypotheses and research questions.
- Collected data from experiments and recorded observations.
- Analyzed data using relevant software or statistical methods.
- Performed various laboratory techniques related to my specific research area, including synthesis, analysis, spectroscopy, and chromatography.
- Handled and maintained laboratory equipment.
- Conducted literature reviews to understand the context of the research and identify gaps in existing knowledge.
- Ensured proper maintenance and calibration of laboratory equipment.
- Troubleshooted and resolved minor technical issues.

## **TEACHING EXPERIENCE.**

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**Apr 2016 - Sep 2016 || Chemistry Tutor ||** Magare Girls High School, Homabay.

- Taught, Examined and Graded Form 1 - 3 students on Chemistry.
- Conducted Chemistry Science Practicals to demonstrate several aspects of Biological concepts.
- Monitored young Science students on how to learn and perfect the concept of science.
- Prepared and presented students for the KCSE Examinations.

## PROFFESIONAL EXPERIENCE.

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**Feb 2025 – To Date || Records Data Officer ||** Public Benefits Organization Revenue Authority (PBORA), Nairobi Kenya

- Organized, filled, and retrieved physical and electronic file records related to Non – Governmental Organizations for revenue collection revenue collection and public benefits.
- Entered, verified, and updated financial records, taxpayer information, and NGO documents.
- Ensured NGO records comply with regulatory requirements and maintained confidentiality of sensitive financial data.
- Assisted in internal audits of Non – Governmental Organizations and generated reports for decision-making.
- Implemented retention schedules and secure disposal of outdated NGO records.
- Liaised with other departments, government agencies, and stakeholders to facilitate smooth record-keeping processes.

**Sep 2023 - Dec 2024 || Freelance Data Analyst ||** UpWork, Nairobi Kenya

- Analyzed data to predict the quality of Red Wine and also generated a linear models to predict the quality of wine based on various physical parameters like fixed acidity, volatile acidity, total sulfur, density, pH, sulfates and alcohol.
- Proficiently cleaned and pre-processed large datasets, ensuring data quality and integrity, removing outliers, handling missing values, and preparing data for analysis.
- Utilized statistical analysis and data mining techniques to extract meaningful insights from complex datasets, including exploratory data analysis, regression analysis, clustering, and segmentation.
- Developed and implemented statistical models, such as linear regression, logistic regression, decision trees, or random forests, to uncover relationships and make predictions based on the given dataset.
- Demonstrated proficiency in working with SQL databases, retrieving, manipulating, and querying data to extract relevant information for analysis purposes.
- Leveraged the R programming language to perform data manipulation, statistical analysis, and visualization tasks, utilizing packages such as tidyverse, dplyr, ggplot2, and tidyr.

- Translated complex data findings into actionable insights, providing clear and concise reports and presentations to stakeholders, and making recommendations based on the analysis.
- Demonstrated strong problem-solving skills, identifying data-related challenges, and developing innovative solutions to optimize processes and improve efficiency.
- Effectively communicated complex data concepts to non-technical stakeholders, explaining findings, methodologies, and implications in a clear and understandable manner.

**Sep 2022 – Aug 2023 || Chemistry Tutor || Magare Girls Secondary School.**

- Responsible for preparing the chemistry and biology laboratories for lessons, ensuring all necessary equipment and materials are available, clean, and in working condition.
- Supporting science teachers during practical sessions by providing guidance on proper use of laboratory equipment, ensuring safety protocols are followed, and assisting students in conducting experiments.
- Ensuring that safety measures are strictly adhered to during all laboratory activities, including the proper storage, handling, and disposal of chemicals, as well as maintaining first aid kits and emergency equipment.
- Keeping track of laboratory supplies, ordering new materials as needed, and maintaining an inventory of chemicals, equipment, and consumables.
- Performing routine checks and tests on laboratory equipment to ensure they are functioning properly and calibrating instruments as needed, such as pH meters, microscopes, and thermometers.
- Providing safety training to students and staff on the proper use of laboratory equipment, handling of chemicals, and emergency procedures.

**Oct 2021 - Aug 2022 || Cashier || Impulse Fast Food Restaurant, Rongo Kenya.**

- Ensured that the daily running of the business through taking records of every purchase made and every expenditure made and recorded the outcome on spreadsheets for further analysis by the Manager.
- Engaged with the customers to help deliver better services by issuing out samples and taking notes of their feedback that was delivered to the Manager for decision-making and better running of the business.
- Introduced the business's first Social Media twitter handle for better customer engagement and attract more customers by offering discounts on particular purchase which lead to more customer satisfaction.

**Nov 2020 - Feb 2021 || Laboratory Attachee || South Nyanza Sugar Company, Awendo Kenya.**

- Responsible for analyses and evaluation of samples submitted to the Analytical Lab, as well as other sample request; Chromatography, K+ values, pH, Waste disposal.
- Trained and supervised a team of laboratory assistants, resulting in improved accuracy and productivity.
- Maintained up-to-date knowledge of industry trends and advances in laboratory technology, contributing to continuous improvement of laboratory processes and procedures.
- Teamed up with the head of the laboratory to run test for the amount of sugar in the A-massecuite, B-massecuite and the molasses then finally analyzed the color of the A-sugar to confirm if it met the requirements for the absorption range at the Quality Control Laboratory and recorded the findings.
- Worked hand-in-hand with my fellow attachees to sample water for treatment that involved testing for Chemical Oxygen Demand (COD) and Biological Oxygen Demand (COD) purposes and effluent disposal.
- General wet chemistry, titrations, sample preparation.

#### **PUBLICATIONS AND SCHOLARSHIP.**

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##### **Dissertations.**

**Ian O.** [2021]. *Effects of sodium metabisulfite preservative levels on meat and meat products in Kakamega Region by the use of UV-Vis and the Monier Williams experiment, comparing the two results.*

##### **Workshops/Conferences/Webinars.**

- Young Professionals Mentorship program. **2023.**
- Global Research on Public Health Analysis, R- Programming Language Bootcamp by the University of Geneva. **2023.**
- National Workshop on Green Technology. **2022.**

#### **AWARDS & PROFESSIONAL AFFILIATIONS.**

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1. Member of the Masinde Muliro University of Science and Technology (MMUST) Chemical Society. **2018 - 2021.**
2. Member of Kenya Chemical Society. **2021 - Date.**

## **APPLICABLE SKILLS.**

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### **Chemical Analysis Skills.**

- Polymerase Chain Reaction(PCR): Primer design.
- UV-Visible Spectroscopy: Analyzing the absorption of ultraviolet and visible light by chemical substances.
- Nuclear Magnetic Resonance (NMR) Spectroscopy: Determining the structure of organic compounds by analyzing nuclear magnetic moments.
- Infrared (IR) Spectroscopy: Identifying functional groups in organic compounds based on their infrared absorption patterns.
- Strategic Leadership: Developing and communicating a clear vision and strategy for the organization.
- Team Leadership: Building and leading high-performing teams, fostering collaboration and motivation.
- Change Management: Guiding teams through organizational changes and transitions.

### **Computational Skills.**

- Statistical Analysis Using R - programming language.
- Data Analysis.
- Machine Learning Algorithms.
- Programming.

## **PROJECTS.**

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- Red-wine Quality prediction using R- Programming language (Random Forest Machine learning).
- Kenya Demographic and Health Survey analysis.
- Survival Analysis (Decision Tree Machine Learning).
- House Price prediction (Linear Regression Machine Learning).

## **REFERENCES.**

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Dr. Bernard Juma.

Chairman of Department, Pure and Applied Chemistry, Masinde Muliro University.

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Dr. Bernard Omogo.

Faculty Member and undergraduate thesis supervisor.

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