

Michael Kofi Nelson

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Conroe, TX

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SUMMARY

- An ardent research scientist with over three (3) years of laboratory experience in research areas including sampling, wastewater treatment systems, fuel oils, material synthesis, and hazardous waste management
- Experience in analyzing and drawing insights from large data sets using diverse knowledge in analytics and data mining
- Data enthusiast eager to learn with 2 years' experience in providing data-driven solutions to solve problems
- Excellent communication and technical writing skills

EDUCATION

Master of Science in Computer Science – Big Data Analytics

GPA: 3.58

Florida Polytechnic University, Lakeland, FL

2018 – 2020

Research Thesis: *Truck Crash Analysis Using Statistical Models and Unsupervised Data Mining Techniques*

Bachelor of Science in Environmental & Safety Engineering

GPA: 3.84

University of Mines & Technology, Tarkwa, Ghana

2013 – 2017

Research Thesis: *Assessment of Water Quality – A Case Study of The Kawere Stream*

WORK EXPERIENCE

Environmental, Health, Safety & Quality (EHSQ) Business Analyst

Nov 2020 - Present

Suddath Global Logistics, Jacksonville, FL

- In charge of analyzing data and reporting on systems for maintenance and change request activities using software applications – Excel, Access, Power BI and iAuditor
- Project lead in automating data analysis processes and application integration
- Undertaking systems analysis and supporting EHSQ team as the technology development representative
- Creating workflows to enhance report cards and ensuring that scorecards are published within the publishing dates for decision-making by management
- Project lead in managing the EHSQ Department metrics and providing updates
- Working as a subject matter expert (SME) in OSHA regulated controlled documents

Substitute Teacher

Oct 2020 – May 2021

Conroe Independent School District, Conroe, TX

- Followed teacher's lesson plan and schedule
- Served in the capacity during the teacher's absence
- Maintained discipline and behavior in the classroom
- Followed routine classroom schedules

Graduate Research Assistant

Sep 2018 – May 2020

Hinkley Center for Hazardous & Solid Waste Management - Florida Polytechnic University, Lakeland, FL

- Explored large truck crash data in Florida using statistical analysis and unsupervised machine learning techniques to determine the factors that contribute to crashes in inclement weather
- Utilized Scanning Electron Microscope (SEM) and Ultraviolet-Visible Spectroscopy (UV-Vis) to characterize and analyze leachate and photocatalyst samples
- Responsible for analyzing experimental data from studies to determine the effectiveness of modified and unmodified catalysts for wastewater treatment
- Involved in synthesis of catalysts to shift the absorption wavelength from UV to Visible light activation
- Collaborated with team members on developing an efficient and cost-effective photosensitizer system for wastewater treatment
- Assisted in the organization of STEM workshops for middle school students
- Presented research findings at conferences

Environmental Officer

Sep 2017 - Aug 2018

Environmental Protection Agency, Ghana

- Collated and analyzed data on the importation of used tires and television sets for monitoring and tracking hazardous waste shipped through the ports and harbors
- Issued permits through the agency for clearing goods and inspected containers shipped into the country for hazardous chemicals

Health, Safety & Environment Officer (Intern)

May 2016 – Aug 2016

Volta River Authority, Ghana

- Sampled and implemented testing of diesel fuel oils and demineralized water before being fed to the thermal power plant for combustion and temperature regulation, respectively
- Conducted routine inspections at the thermal power station to identify hazards and suggested solutions to eliminate hazardous conditions
- Planned and delivered presentations to educate various departments about workplace unsafe conditions and practices

Health, Safety & Environment Officer (Intern)

May 2015 – Aug 2015

Quantum Terminals Limited LPG Facility, Ghana

- Revised company's safety standards and policies for improved safety conditions
- Collaborated and implemented safety meetings and completed daily routine checks at the facility to minimize accidents and near miss incidents
- Planned orientations for truck drivers and inspected liquefied petroleum gas trucks before entering the loading facility
- Cross-trained at the transfer station to pump liquefied petroleum gas into the facility's storage tanks

TECHNOLOGICAL EXPERTISE

- Programming: Python, R, SQL,
- Tools: RStudio, Microsoft SQL Server, Power BI, Excel
- Statistics: Regression, ANOVA, Clustering

PATENT

- Wallen, S. L., Srinivasan, S. S., **Nelson, M. K.**, and Alvarez, G., "New Photosensitizer Compositions", USPTO, Provisional Application in preparation

CERTIFICATIONS

- COVID-19 Contact Tracing Oct 2020
- Measuring and Maximizing Impact of COVID-19 Contact Tracing Oct 2020
- Collaborative Institutional Training Initiative (CITI) Program Feb 2020
- Imperial College of Mines & Safety (IMCS) Training Center: Health & Safety in the Oil & Gas Industry Dec 2016
- Ghana Red Cross Society Standard Practical First Aid Training Apr 2016
- Solar Utilization Company (SUCO-PLUS) Training Center: Stand-Alone Solar Photovoltaic (PV) System Design and Installation Dec 2014

AWARDS/HONORS

- Male Best Leader - TRUE East Leadership Conference 2019 May 2019
- Outstanding Graduate Student Poster Presentation, Florida Academy of Sciences Mar 2019
- Dr. Elizabeth Hays Travel Award, Graduate Student Poster Presentation Mar 2019

CONFERENCES

- Australasian Institute of Mining & Metallurgy (AusIMM) Conference Sep 2016
- Ghana Institute of Safety & Environment Professionals (GhISEP) Summit 2016, "Back to Basics: Taking HSE to its right place in Ghana" Jul 2016

CONFERENCE PRESENTATIONS

- Extraordinary Biochemical Enhancement of Titania Photocatalytic Reduction Reactions (5th International Conference on Catalysis and Chemical Engineering – San Francisco, Online) Feb 2021
- Leachate Characterization and Remediation via Advanced Oxidation (Green Chemistry, Engineering and Technologies (GCET)) Oct 2019
- Leachate Characterization and Remediation via Advanced Oxidation (Solid Waste Association of North America (SWANA) Florida Summer Conference) Jul 2019
- Dilution Series and Standardization Analysis for Wastewater Treatment Processes (Florida Academy of Sciences 83rd Annual Conference) Mar 2019
- Design and Fabrication of Custom Built Variable Photocatalytic Continuous Flow Reactor for Water Detoxification (Florida Academy of Sciences 83rd Annual Conference) Mar 2019
- Comparison of the efficiency of Photocatalytic Remediation of Landfill Leachate and Wastewater with a Solar Simulator and UV-Visible Light Batch Reactor (Florida Academy of Sciences 83rd Annual Conference) Mar 2019

PEER REVIEW PUBLICATIONS

- **Nelson, M. K.**, Alvarez, G., Wallen, S. L., and Srinivasan, S., "Demonstration of Wavelength Dependence of Water Remediation Using Sensitized Photocatalysts", J. Chem. Ed., under review
- **Nelson, M. K.**, and Vadlamani, S., "Truck Crash Analysis Using Statistical Models and Unsupervised Data Mining Techniques", under review

VOLUNTEERING

- Volunteered at the Food for Life Way Conroe "Stock the Sleigh" Event Clean Up
- Volunteered at the RussMatt Baseball competition in Lakeland for the Rotary Club
- Volunteered at local elementary schools to assist with teaching and organizing science fair projects
- Mentored students in middle and high school
- Volunteered with my church to visit the orphanage for donation of food items and clothing and then shared God's word

AFFILIATIONS

- National Society of Black Engineers (NSBE)
- Rotaract Club of Florida Polytechnic University, Lakeland
- International Students Inc. (ISI) Lakeland
- Ghana Institute of Safety and Environmental Professionals (GhISEP)
- Ghana Institution of Engineers (GhIE)

HOBBIES

- Soccer
- Running
- Yoga
- Choral Music
- Dancing
- Reading