Emmanuel Mfum – Mensah

(Junior Systems Analyst, Software Development Services, UITS-KNUST)

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| Address: | C/O UITS KNUST, PMB UPO, Kumasi. |
| Contact Number: | 0501377752 (WhatsApp line) | 0248765917 | 0206915470 |
| Email Address(s): | [emfummensah@gmail.com](mailto:emfummensah@gmail.com), [emfummensah@outlook.com](mailto:emfummensah@outlook.com), emmensah@knust.edu.gh |
| Facebook Page: | [@emfummensah](https://www.facebook.com/emfummensah) |
| LinkedIn: | <https://gh.linkedin.com/in/emmanuel-mfum-mensah-34808b69> |
| Skype Name: | emfummensah |
| Date of Birth: | 27th August, 1987 |
| Language(s) | English, Ga and Twi |
| Marital Status: | Married |

# Core Objective

Passion driven, team-work and the can-do spirit are key ingredients in my approach to every task, be it technological or otherwise. With such, coupled with a lifelong desire for knowledge acquisition, I am poised to achieve greatness for the common good of my organization.

# Career Summary

## junior systems analyst

## KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNLOGY

**AUGUST 2020 – PRESENT**

***Key responsibilities***

* Lead technological innovation
* Core member of Computer Applications Development, Management and Maintenance team
* Database modelling, development and administration
* Systems Analyst
* Workshop and Training instructor
* KNUST SMS portals team lead, etc.

## PRINCIPAL ICT ASSISTANT

## KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNLOGY

## FEBUARY 2017- JULY 2020

***Key responsibilities***

* Applications Developer
* Systems Analyst
* Key Member of the team managing critical institutional databases and systems;
  + Academic Records and Student Information
  + Student Financial Records
  + Staff Records
  + Student Application and Admission Records
  + Bank Integration Web Service
  + Online Payment Records, etc.
* Database Modelling and Developer
* SQL Server DBMS Administrator
* Member of the team that develop, deploy and maintain various ERP & Management Software;
  + Academic Records Management Information System (ARMIS)
  + Synergy Human Resource Management Information System
  + Panacea Financial Accounting System
  + Application and Admission Information System
  + Student and Staff Biometric System, etc.
* Assist in organization of training workshops for both KNUST Staff and staff of various affiliate institutions.
* KNUST short message service (SMS) Portal Management Team Lead (Paid and Vodafone Platform)
* Boot camp internship programme facilitator
* Training of National Service Personnel for my Department
* Technical Support and assistance to various Users and students (Software)
* Software and SQL Server troubleshooting
* Software Development Services Department meetings and workshops facilitator, etc.

## Senior ict assistant

## KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNLOGY

## jANUARY 2012 – JANUARY 2017

***Key responsibilities***

* Database Modelling and Developer
* SQL Server DBMS Administrator
* Assisted development, deployment and maintenance of various ERP & Management Software with c#, WinForms and asp.net MVC technology (ARMIS, Synergy, Panacea, Admission system, etc.)
* Assisted in organization of training workshops for various users.
* KNUST SMS Portal Lead manager
* Boot camp facilitator
* Technical Support and assistance to various Users and students (Software)
* Trained National Service Personnel.
* Software Development Services Department meetings and workshops facilitator, etc.

## SMAC Artesunate Follow - up Study: Data Entry Personnel

## KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNLOGY(SMS/KATH)

## july 2011 – january 2012

***Key responsibilities***

* Data Entry of medical records into CenTrial GmbH web application for the study at the Pediatric and Emergency Unit of Komfo Anokye Teaching Hospital.
* Provided technical support to members of the study team which included medical students of Universitätsklinikum Tübingen, Institut für Tropenmedizin.

## Casual Staff: Data Entry and Management

## KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNLOGY(IDL)

## july 2011 – JANUARY 2012

***Key responsibilities***

* Managed MS Access Database on Students, Centers, Facilitators.
* Generated essential reports for Management.
* Provided IT support (Hardware and Software)

## National Service: ICT Personal at the Main Administration

## KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNLOGY

## august 2010 – augusT 2011

***Key responsibilities***

* Provided General ICT support (Software and Hardware) to the Vice Chancellor's Offices, Registrars' Offices, Finance Office and other Units.
* Embarked on research, data collection and inventory of computer equipment
* Acquired knowledge in Network Administration and Windows Active Directory and Network Resource Sharing.
* Assisted in the implementation of Windows Active Directory at the Main Administration.
* Monitored Network performance on all switched within the LANs.
* Trained and assisted staff on use of Microsoft Office Suites (PowerPoint, Word and Excel).
* Monitored VoIP signals and performance daily.
* Network Troubleshooting
* Assisted Systems Programmer at the Human Resource Division on MS Access, etc.

## INTERNSHIP: Office Assistant in Data Entry and Collection Department

## SOCIAL SECURITY AND NATIONAL INSURANCE TRUST, KOKOMLEMLE

## JUNE 2009 – JULY 2009

***Key responsibilities***

* Filing and retrieval of Contributors' records.
* In-office and on-field registration of new contributors.
* Studied the algorithm for the calculation of entitlements.
* Acquired knowledge on the Electronic Branch Operation System(eBOS).
* Embarked on a study to understand contributors' data management with the organization.
* Educated contributors, both new and old, on policies and benefits of the Trust.

## BECE Script Checker

## west african examinations council, roman ridge

## july 2008 – august 2008

***Key responsibilities***

* Checked marked BECE scripts for errors.

## INTERNSHIP: ICT Personnel in MIS Department

## ghana highway authority, ministries, accra.

## JUNE 2007 – august 2007

***Key responsibilities***

* Provided general IT support (hardware and software)
* Acquired knowledge in Visual Basic
* Assisted with Inventory exercise on broken down/obsolete computer equipment
* Performed data entry in MS Excel on monetary compensation for Road construction casualties

# Education

## PHD APPLIED MATHEMATICS | SEPTEMBER 2019 – ONGOING

## KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

* Area of Research: Mathematical Optimization (Operations Research)
* Other Research Areas: Computational Origami, Computational Geometry, Data Analytics, Algorithms.

## mphil applied mathematics | july 2019

## KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNLOGY

* Major: Computational Origami
* Related coursework: Optimization, Functional Analysis, Numerical Analysis, Scientific Computing, Differential Equations (PDE, ODE).

## bsc MATHEMATICS | june 2010

## KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNLOGY

* Major: MATLAB Programming
* Related coursework: Optimization, PC Computing, Stochastic Processes, Calculus, Logic and Set Theory.

## senoir secondary school certificate EXAMINATION(SSSCE) | august 2005

## accra academy

* Major: Science (Biology)

**Basic Education Certificate Examination (BECE) | july 2002**

## Association International School, Airport Residential Area, Accra.

# ­Skills

## programming SOFTWARE EXPERIENCE

* SQL Programming (SQL Server DBMS and MS Access)
* C# with Windows Forms and ASP.NET MVC/ ASP.NET Core MVC
* MATLAB for application development
* Simulink
* SQL Server Integration Services and SQL Server Data Tools
* Html
* Dart for Flutter (cross platform mobile application development)
* Google Scripts
* Python

## MATHEMATICAL SOFTWARE EXPERIENCE

* MATLAB
* Simulink
* Wolfram Mathematica
* Lindo Lingo (for Optimization)
* AnyLogistix

## OTHER software EXPERIENCE

* Expert in Microsoft Office Suite (including MS Power Business Intelligence, Advance Excel, MS Project and MS Visio)
* Latex Typesetting platform
* Memento Android Database Development Tool
* TreeMaker® for computational origami
* Oripa for computational origami
* Visual Studio 2017, 2019
* SQL Server 2017, 2019
* SSIS, SSDT
* Daisy for Agricultural Simulations

## online platforms

* Google Online Suites (Including Google Sites, Google blogs and Forms)
* WordPress
* Microsoft Online Suits (Including Sway presentation, Forms and Flow)
* Social Media Page Developer and manager

## Communication

* Eloquent
* Possess the ability to simplify complex concepts for the comprehension of my audience.

## other skills

* Data Science with SQL Server
* Statistical Analysis with SPSS
* Computational Optimization and Calculus
* Graphic Designer
* Social Media Page Developer

## Leadership

* Lead several tasks as part of my job function;
  + SMS Portal Team Lead
  + Department’s Boot Camp Programme Development and facilitation Team Lead
* Religious Service
  + Was National President for the National Union of Anglican Students – Ghana (2009-2010)
  + Coordinate the activities of the following committees at Church
    - ICT Team
    - Programmes Committee
    - Fund Raising
    - Policy formulation

# Certifications

## certificate of completion

## national open university of technology, africa center of excellece on technology enhanced learning (acetel) TRAINING ON PYTHON AND MACHINE LEARNING

**14th – 19th JUNE, 2021, AMOMOO NEIZER CONFERENCE CENTER, KNUST, KUMASI**

***Courses Treated***

* Knowledge in python
* Design and programming python applications
* Using lists, tuples and dictionaries
* Python object types and object-oriented programming
* Common machine learning tools
* Formulating problems for machine learning
* Solving practical problems using machine learning tools

## certificate of participation

## kwame nkrumah university of science and TECHNOLOGY

## BUILDING STRONGER UNIVERSITIES (BSU III) PROJECT in Collaboration with Aarhus University, Denmark

**11th – 15th NOVEMBER, 2019, SCHOOL OF GRADUATE STUDIES, KNUST, KUMASI**

***Courses Treated***

* Integrated modelling of agricultural systems using Daisy software
* Understanding and measuring greenhouse gas emissions in agricultural systems
* Conducting meta-analysis of existing studies to assess the robustness of treatment effects

## certificate in information security best practice

## UITS KNUST Information Security Training

## 4TH – 7TH NOVEMBER, 2019, FACULTY OF PHARMACY, KNUST

## FACILITATOR: DR. PAUL DANQUAH (ISO 27001 LI, CEH, CEI, DCIE, CCNP, MCSE, PhD, MSc, BSc)

***Courses Treated***

* Overview of Information Security (Legal & Regulatory, Managerial and Technical)
* Legal Issues (National Acts, International Conventions, Applicable National Regulations, Policies, Practical case studies)
* Managerial (Leadership, planning, operation, performance evaluation, improvement, risk management, ISMS and MM, Practical Case Studies)
* Technical (Scope, VART & Countermeasures, Reporting, SOC Analysis, Digital Forensics, Practical Case Studies)
* Certification Paths.

## CERTIFICATE OF CONTINUING PROFESSIONAL EDUCATION

## ISACA 7TH IT GOVERNANCE SUMMIT

## 10TH – 11TH OCTOBER 2019, AQUA SAFARI RESORT, ADA FOAH

***Courses Treated***

* Cyber and Technology Risks – Boardroom Concerns
* Risk Management: An IT Governance Imperative
* Managing the Cyber Security Regulatory Complexities of Financial Institutions
* Auditing the Digital Forensic Process
* Facilitating Effective Cybersecurity Compliance in an Enterprise- Workshop
* ISACA Certification Brief
* The Role of Ethics in the Advancement of Information Security
* Regaining Control Over Your Data - Data Governance
* The Chief Information Officer (CIO) and Governance
* SheLeads Tech

## certificate of participation

## kwame nkrumah university of science and TECHNOLOGY

## BUILDING STRONGER UNIVERSITIES(BSU) PROJECT II

## march 2017, golden bean HOTEL, KUMASI

* Conference poster presenter on the topic “*Enhancing Lecturer-Student interaction using WordPress with Google Applications”.*
* Theme: Maximizing Stakeholder Involvement in Productive Research and Uptake

## certificate of completion

## MISTI (mis Training institute)

## august 2016, LA PALM ROYAL BEACH HOTEL, ACCRA

***With 24 Continuing Education Credits points in Auditing. Courses Treated***

* Digital Forensics - Tracking the Trails of Cyber Criminals
* Cyber Attacker & Defender: Emerging Cyber Attacks and Countermeasures
* How eavesdropping resistant is your organization?
* Auditing Catastrophic Risk to Build Organizational Resilience
* Who has Access to your Data?
* The Insider Threat to Cyber Security

## certificate of merit in scientific writing

## college of health sciences, KNUST

## BUILDING STRONGER UNIVERSITIES(BSU) PROJECT II

## july 2016, noda hotel, kumasi

***Courses Treated***

* How to search through journals
* Writing Scientific Paper for Top journals
* Proficiency in Grant Proposal Writing

## Certificate of Participation in one month GIS Training

## department of geography, knust

## july 2016

***Courses Treated***

* Introduction to ESRI Arc GIS
* Arc Map and Map Analysis
* communicate information

## Certificate of Competence in Teaching and Learning in Higher Education

## waber professional education

## march 2016

***Courses Treated***

* Teaching values and approaches
* Planning teaching and learning to achieve constructive alignment between learning outcomes, content, learning activities, assessment and evaluation
* Curriculum and course design strategies
* Assessment strategies in higher education
* Good practice in providing feedback to students
* Designing learning activities
* Strategies for teaching large classes
* Evaluating courses and developing a teaching portfolio.

# VOLUNTEER EXPERIENCE

## keynote speaker

## GHANA SCIENCE ASSOCIATION WEBINAR 2020 (VIRTUAL)

## JULY 2020

* Theme: Using Science, Technology and Innovation in the Current Pandemic and Beyond
* Topic: The Quest for Technological Solutions in Education During Pandemic
* Link: <https://sportsauthority.gov.gh/2020/07/29/ghana-science-assoc-cos-knust-ends-webinar-conference-with-nsa/>

## interactive stand lead

## kwame nkrumah university of science and technology

## 2019

* Managed the interactive stand for the Chancellor’s 20th Anniversary celebration programme organized by KNUST in honour of the Asantehene. Kahoot, a game-based online learning platform was used to develop a multiple-choice competition.

## TECHNICAL LEAD/SYSTEMS ANALYST FOR ENVAC PROJECT

## Department of AGRICULTURAL ECONOMICS, AGRIBUSINESS AND EXTENTION(KNUST)/ WORLD FOOD PROGRAMME

## 2018

* Modelled and developed an Android data collection system using Memento to capture field data.
* Modelled and developed an MS Access Database to serve as repository for data collected
* Developed an online GIS map with ARC GIS online and Google Maps with location plots for farmer organizations and resources.
* Provided technical support.

## TECHNICAL LEAD/SYSTEMS ANALYST FOR rofe PROJECT

## Department of AGRICULTURAL ECONOMICS, AGRIBUSINESS AND EXTENTION(KNUST)/ department of biochemistry

## 2018

* Modelled and developed an Android data collection system using Memento to capture field data.
* Provided technical support.

## practical session facilitator for the course mhrs 558 and mas 455

## Department of human resource and organizational development(knust)

## 2018 – PRESENT

* Work in collaboration with the Lecturer as Practical Session Facilitator for the course MHRS 558/MAS 455 Human Resource Information Systems by having hands-on seminar for final year undergraduate and graduate students on how to develop a Human Resource Information System with MS Access;
  + Relational Databases
  + Graphical User Interfaces
  + Queries (Select, Crosstab, Insert, Delete, Update)
  + Access SQL
  + Reports
  + Macros

## SOCIAL media developer

## kwame nkrumah university of science and TECHNOLOGY

## 2018 – PRESENT

* Created a Facebook page for the International Programmes Office(https://facebook.com/ipoknust) and train staff on how to use it in line with their core mandate and to improve brand awareness.

## technical committee lead, etit project

## Department of human resource and organizational development(knust)

## 2018 – PRESENT

* This project is collaborative project between the Department of Human Resources and Organizational Development and some Software Developers to develop a comprehensive proposal to enhance Tourism Industry in Ghana with Technology (eTiT).

## member, standing committee on university teaching skills

## kwame nkrumah university of science and technology

## november 2016 – march 2017

* The Standing Committee was tasked to develop a mandatory training schedule for all Academic Staff with the aim of improving their teaching,

## member, standing committee on UNIVERSITY BRANDING AND COMMUNICATION DESIGN

## kwame nkrumah university of science and technology

## november 2016 – april 2017

* The Quality Assurance and Planning Unit set up this committee to develop policy and guidelines on brand management and communication design for the Kwame Nkrumah University of Science and Technology with the vision to build on its leadership as a premier Science and Technology institution in Ghana and to become a leading university in Africa.

## mcq script scanner operator

## kwame nkrumah university of science and technology

## 2013

* Assisted staff of the Quality Assurance and Planning Unit mark scannable scripts for the 2012/13 academic year using Script Scanner.

## applications DEVELOPMENT INSTRUCTOR

## kwame nkrumah university of science and TECHNOLOGY

## 2015 – PRESENT

* Team up with colleagues to mentor students and staff who desire to study application development with the following;
  + C#
  + SQL Server
  + ER Studio
  + APS.NET MVC
  + Windows Forms
  + MS Access

## WEB DEVELOPMENT INSTRUCTOR AND PARTICIPANT

## ACCRA ACADEMY

## 2003 – 2005

* Global Teenager Project by International Institute for Communication and Development (iicd): Development of Websites with MS Office and MS Frontpage on Social Issues.

# ­PROJECT

## Web Presence Enhancement Project(WePeP)

JANUARY 2017 – PRESENT

This is personal initiative which seeks to optimize use of the internet to enhance the teaching and learning process in higher educational institutions. A website is developed for Members of any institution’s faculty for online personality projection and serve as an online learning ground. With this site, faculty members, in addition to letting the world know of their expertise and specialty, get on online presence and platform to display information on courses taught, course materials, show schedule online, encourage students with insightful quotes and make available to students’ past questions for download and try. Sites are developed with WordPress and fused with Google's form for online quizzes. I train beneficiaries on Web Content Management to manage their own sites. Example: https://anthonydrews.wordpress.com.

# ­PUBLICATIONS

## E. Mfum-Mensah, A. Andrews, Enhancing Lecturer-Student interaction using WordPress with Google Applications, BSU II Journal, 2017, 23

***Abstract***

* Emphasis is placed on infusing web-leaning in higher education knowledge transfer efforts to make productive use of the internet. Web Presence Enhancement Project (WePeP) is a website creating project to optimize use of the internet in enhancing the teaching and learning process in higher educational institutions using an open-source software.

## E. MFUM-MENSAH, J. ACKORA-PRAH, ASPECTS OF ORIGAMI MATHEMATICS; A REVIEW, 2019

***Abstract***

* Some intrinsic mathematical concepts in the art and design of paper-folding, widely known as Origami is reviewed in general. With paper defined mathematically, properties of its fold and states is discussed.

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# HONOUR AND AWARD

## most dedicated male student, global teenager project learning circle

## ACCRA ACADEMY

## 2004

* Award Signed by Dr. Ebenezer Malcolm
* For being the most dedicated male student during the Global Teenager Project Learning Circle 2004. International Institute for Communication and Development, SchoolNetAfrica.