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EDUCATION

Ashesi University
BSc. Electrical and Electronic Engineering

Berekuso, Eastern Region
Sept 2016 - May 2020

ACHIEVEMENTS/AWARDS

African American Institute (AAI) Scholar , Ashesi University	2016 – 2020
Dean's List , Ashesi University	2016 – 2020
International Youth Math Challenge - Finalist	2018/19
Best WASSCE student , O'Reilly Senior High School	2015/16

CERTIFICATIONS

AWS Certified Solutions Architect - Associate	Oct 2020 – Oct 2023
<ul style="list-style-type: none">Issued by AWSValidation Number F621DJVL1MQQQC94	
Certified Network Security Specialist	Jun 2020 – No Expiration Date
<ul style="list-style-type: none">Issued by International Cyber Security Institute (ICSI), UKCredential ID 19288136	
AWS Certified Developer – Associate 2020	Mar 08, 2021
<ul style="list-style-type: none">Trained and Issued by ACloudGuruVerify at: ACLOUD.GURU/537578437CDF	
AWS Certified SysOps Administrator – Associate 2020	Feb 01, 2021
<ul style="list-style-type: none">Trained and Issued by ACloudGuruVerify at: ACLOUD.GURU/878AD0772E90	
AWS Certified Solutions Architect – Professional 2020	Jan 01, 2021
<ul style="list-style-type: none">Trained and Issued by ACloudGuruVerify at: ACLOUD.GURU/FDD620D929BD	

PUBLICATIONS

Cement-Plastic Based Composites: The Building Blocks of Future Structures	Jan 2020
<ul style="list-style-type: none">Researched and used math and statistics to verify cement plastic-based composites in Ghana.Analyzed the data collected with R-programming and MATLAB.The journal was published in the Ashesi SEED Journal.	

CAPSTONE – Undergraduate Final Year Project

An IoT-Based Monitoring System for Fuel Filling Stations	Sep 2019 - May 2020
<ul style="list-style-type: none">Designed, developed, and implemented an IoT monitoring system to streamline transaction processes for fuel filling stations.Implemented a python code to control and monitor the devices and send data to a MySQL database server.The system had a well-developed dashboard designed with NodeJS framework for users to easily interact with the device and make business decisions.The intelligent system was able to determine the conditions of the tanks with python programming based on a predictive data analysis.	

WORK EXPERIENCE

Cloud Architect – CloudFruition	Aug 2020 – May 2021
<ul style="list-style-type: none">Successfully designed, developed, and deployed Windows Desktop-as-a-Service using Amazon Active Directory Service, AWS Workspaces and VPC, and allow all Windows Desktops to share a common storage using Amazon FSx for Windows.Deployed a website using EC2 Instance, Cognito and DynamoDB, then used Gremlin to break the system by creating network blackholes and overloading the CPU. This was to simulate failures that might occurred on the environment before deploying a highly scalable and available web server.Successfully implemented a python script for Linux, Windows, and Mac OS to launch, stop, start, and terminate AWS EC2 Instances, and terminate and take snapshots of EBS Volumes.Successfully developed AWS CloudFormation templates to deploy services such as EC2, S3, EBS Volumes to automate my AWS environment.Deployed and managed applications hosted on docker containers and performed undisrupted changes to the environment.Designed, coded, and deployed a NodeJS Web Application with AppSync that leverages API gateway to handle API requests backed by DynamoDB database to store the data collected on the App.Automated a fully designed AWS environment with Lambda using Python. Some of the projects include: Creating EC2 Instances by triggering an event in Lambda, Enabling VPC flow logs using Lambda, Creating Slack Notifications for CloudWatch Alarms, Using Twitter API to send a tweet with Lambda.	
Faculty Intern and Research Assistant – Ashesi University	Aug 2020 – May 2021
<ul style="list-style-type: none">Interning to assist faculty to teach, organize class content, supervise engineering projects and research.	

- Assisted in tutoring, grading and offering students' first hand support in Internet of Things (IoT), System Dynamics and Control Systems.

Invetack Global – Medina – Accra, Lead Security Engineer

Dec 2019 – Oct 2020

- Work as content creator to design hacking labs and CTF challenges for people around the globe to participate.
- Work as an offensive security trainer by training institutions such the Ghana Armed Forces on practical ethical hacking and CTF training.
- Monitor, maintain and update the company websites and other online infrastructures.

Translight Solar Ltd – East Legon – Accra, IT Technical Support

Jun – Aug 2018

- Worked as the IT Technical Support Officer to secure and configure their computer systems.
- Spearheaded Digital marketing using MailChimp and social media and acquired 20% of company's customers.
- Created a database of all schools in Accra and developed a spreadsheet for cost benefit analysis for the solar for schools' project to tell its viability.

Ashesi University – Berekuso, Eastern Region

Jan 2017 – Mar 2020

Math Tutor and Head of Ashesi Math Support Team

- Tutored, organized, and coordinated students and coached new team members.
- Achieved a record of more high scoring students in Calculus since 2018.
- Recorded a 70% increase in students who sought help from the math center.

PROJECTS AND RESEARCH

Freelancing Projects

Jan 2018 – Present

- **Hilltop:** Currently working on a blog, music and podcast streaming application with Laravel for Hilltop Radio. Configured Amazon s3 to store all objects (images and audio files) on the site. The newer version (currently in testing mode) is available on digitalocean at <http://64.227.5.48/> . Configured a CI/CD pipeline to make updates and deployment easier on the site. The older site is also available at <http://hilltopradio.online/>
- **Afrowave:** Developed a music selling platform for Afrowave with Laravel. The application comes with PayPal payment gateway to allow users make purchases on the platform. Amazon S3 was also configured with the necessary policies and programmatic access to store all objects on the site. Configured a CI/CD pipeline to make updates and deployment easier on the site. Site hosted on GoDaady is available at <http://www.afrowav.com/> .
- **Ruwa On The Go:** Developed a refilling station web app with Flask Framework for Ruwa. Currently working on a mobile app frontend views (with flutter) to integrate with a backend APIs developed with Flask. The static site developed with Bootstrap and custom CSS and JS is also available at <http://ruwaonthego.com/>
- **Ginja Trade Invest Chat:** Implemented and deployed a trading platform where users can deposit, buy and sell on the platform with Laravel. Configured Amazon s3 to store all objects on the site.
- **MorJoyGH:** Developed and deployed an ecommerce site built with Laravel on hostinger.com. Available at: <https://morjoygh.com/>
- **KtechHub:** Successfully developed (with Laravel) and deployed an e-learning platform on DigitalOcean Cloud Platform. Amazon S3 was also configured with the necessary policies and programmatic access to store all objects on the site. Configured a CI/CD pipeline to make updates and deployment easier on the site. Available at <https://www.ktechhub.com/>
- Successfully developed (with Laravel) and deployed my personal portfolio on hostiger.com. The site is available at <https://mumunimohammed.com/>
- Other sites: <http://mcudjoe.com/>, <http://manassehcudjoe.online/>, <http://www.dehealthwriter.com/>, <http://havenwhisper.com/>

Umbrella Vending Machine, Ashesi University

Jan – April 2019

- Built an umbrella vending machine with Raspberry Pi and NodeMCU (ESP8266) that works with an online hosted WebApp.
- Used Python, HTML, CSS, PHP and JavaScript to execute the project.

Smart Automated Solar Irrigation System, IoT Project, Ashesi University

Jun – July 2017

- Built a smart automated solar system that irrigates a farm without human interference.
- Worked on the electronic and the programming part of the project to achieve the desired output.

Data Mining and Visualization, Ashesi University

Sep – Sep 2017

- Developed a data mining algorithm using the KMeans technique with python computer programming.
- Mapped out similarities in crime among countries in Africa and made future crime predictions.

LEADERSHIP AND CO-CURRICULAR ACTIVITIES

Udemy Course Instructor, - Online Learning Platform

Aug 2019 – Present

- Published two complete courses on WordPress, and Network and Computer Security.
- Over thousand students across more than 80 countries in the world are enrolled.

KTECH HUB, Founder and CEO

Jul 2019 – Present

- KtechHub is a one-man platform that seeks to share knowledge among individuals in the word ranging from cyber security, Internet of Things, Web and App Development, Programming Languages.
- I have published tutorials on Geogebra, Internet of Things, Cyber Security, etc. on my YouTube Channel (.

Ashesi CyberGeeks Club, Founder and President

Aug 2019 – Jun 2020

- CyberGeeks encourages cyber security awareness and application by providing students with the tools and education needed to advance their careers.

- Organized a cyber security awareness day to educate the Ashesi Community about cyber-attacks on-campus.
- Developed phishing kits for awareness and CTF challenges for students to participate.

Ashesi Pro-Solve Club, Founder and President

April 2018 – Jan 2020

- The club that seeks to bring out the hidden problem solving and algorithmic thinking skills in students to become problem solvers.
- I have impacted more than 100 students with Mathematics and Programming skills.

Red Army - Ashesi Football Association (AFA), Defender

Jan 2017 – Sep 2019

- Played as a defender for my team and won the Ashesi Premier League four times.

SKILLS

- Strong understanding with AWS ecosystem; Compute (EC2, EC2 Auto-scaling, Lambda, Elastic Beanstalk), Network (VPC, Route53, CloudFront, ELB, API Gateway), Storage (S3, EBS, EFS, Windows FSx, Storage Gateway), Databases (RDS and DynamoDB), Management and Monitoring (AWS Organizations, CloudWatch, CloudTrail, Config), Directory Service, Workspaces, Athena, IAM, SQS, SNS.
- **Frontend:** 2+ years' working with HTML, CSS, JavaScript
- **Backend:** 2+ years' working with Python (Bottle, Flask and Django) and Laravel
- **Databases:** MySQL, Postgre SQL, SQLite, MariaDB, and MongoDB
- **CMS:** WordPress
- 3+ years of experience with Windows and Linux OS Distros.
- Versioning: Git, Bitbucket, CodeCommit and CodeDeploy
- Experience with other programming languages such as C, C++
- Solid knowledge about ethical hacking, vulnerability management, web application security, and network security.
- Strong people skills and ability to work in a team environment (remote).
- Ability to estimate costs and identify control mechanisms as well as select the appropriate cloud technologies based on data, compute, storage, and security requirements.
- Strong documentation skills for documenting solutions.