OKORIE EMMANUEL O

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RESEARCH INTERESTS:

Artificial intelligence, deep learning, machine learning, multi-agent systems: coordination, collaboration, and control, computer vision, intelligent applications (mobile and web), robotics, human-robot interaction, domestic robots, social human-robot interaction, drone design and technology, intelligence gathering drones, digital health, intelligent health care systems

EDUCATION

University of Jos, Nigeria **05/2018 – present**
MSc (Computer Science)
Thesis: An Intelligent communication Device for Speech and Hearing-Impaired Persons Using Deep Learning
Supervisor: Prof N.V Blamah

University of Jos, Nigeria **02/2011 – 08/2016**
BSc (Computer Science)
4.11/5.0 (3rd best in class)
Thesis: A Hybrid Communication-Based Surveillance Quadcopter UAV NetQuadcopter

Federal Polytechnic, Nekede, Nigeria **02/2006 –08/2008**
National Diploma (Electrical Electronics Engineering)
3.37/4.0 (Best in class)

ACADEMIC HONORS AND AWARDS

- **1st prize,** IET PATW Competition 2016 Nigeria Local Area Network
- **1st prize**, Northern Hackathon and software Competition 2015 HACKJOS Android App, GSM home automation system that uses a mobile device to control electrical appliances in the home or at the office.

SCIENTIFIC PUBLICATIONS

1. **Emmanuel O. Okorie**, Nachamada V. Blamah. 2017. Hybrid Communication Based Surveillance Quadcopter UAV (NetQuadcopter). American Journal of Intelligent Systems, 7(4): 113-119.

2. N.V. Blamah , **E.O. Okorie** and B.Y. Baha. 2017.Netquadcopter autonomous flight Control using flood fill algorithm. The journal of computer Science and its applications, Vol. 24, No1.

SOFTWARE PROJECTS

Hackathon project - Android App, GSM home automation system that uses a mobile device to control electrical appliances in the home or at the office.

Selected Web Projects

- Hospital Management System
- Industrial Training Fund (ITF) E-learning management system
- Industrial Training Fund (ITF) Staff training and tracking system
- University of Jos Re-modeled website

PROGRAMMING/ELECTRONICS SKILL SETS

Programming Languages

- Python
- JavaScript (React Js, Vue Js)
- C++

Frameworks

- Django
- TensorFlow
- Flutter
- Adonis Js
- Opencv
- WordPress
- PyQt

Operating Systems

- Ubuntu
- Windows
- MacOs

Microcontrollers

- Atmel 8051
- Arduino
- Raspberry Pi

ACADEMIC/TEACHING EXPERIENCE

University of Jos, Nigeria

- Taught Python Programming (Cs101) to first-year computer science students in first semester.

- Taught Python Programming (Cs101) to Second-year students of Library and information management technology in first semester.
- Taught C++ Programming (Cs201) to Second-year students of Zoology in first semester.
- Taught mips assembly language programming using qtspim (Cs203) to Second-year students of Computer science in first semester.
- Taught Introduction to electronics design to Second-year students of Computer science in first semester with the use of protus simulator.
- Supervised 300 students presentation in Data Structure and Algorithm CS305

RESEARCH EXPERIENCE

University of Jos, Nigeria

- Artificial Intelligence (Ai) Approach To Monitoring And Tracking Of Terrorist Activities With Drones 2020- present
- Hybrid Communication Based Surveillance Quadcopter UAV (NetQuadcopter)
- Intelligent communication device for speech and hearing impaired person Using Deep Learning.

CONFERENCES ATTENDED

- E-Nigeria International Conference 2015 (Presented Smart Home Security Monitoring System with Live Video Streaming), 2016, 2017
- Software Engineering Conference, ICT Directorate University of Jos 2016

PROFESSIONAL DEVELOPMENT

- Member Computer Professionals Of Nigeria (CPN) 2018
- Neural Networks and Deep Learning – deeplearning.ai, coursera.com, 2019
- Courses taken on udacity.com
  1. Artificial Intelligence for Robotics
  2. Deep Learning
  3. Intro to TensorFlow for Deep Learning
  4. Introduction to TensorFlow Lite
  5. Neural Networks and Deep Learning
  6. PyTorch Scholarship Challenge
- Courses taken on udemy.com
  1. Flutter & Dart - The Complete Guide [2021 Edition]
  2. Full stack web development and AI with Python (Django)
- CISCO Networking Academy- Cybersecurity Essentials, May 9, 2019

WORK EXPERIENCE

GENIUSSOFT DIGITAL SOLUTIONS LIMITED **2018 - present**

Full Stack Software developer

- Developing visually appealing front end website architecture, including translating designer mock-ups and wireframes into front-end code.
- Designing user interactions on web pages
- Developing functional databases, applications, and servers to support websites on the back end
- Ensure cross-platform optimization for mobile
- Developing and designing RESTful services and APIs
- Staying abreast of developments in web applications and programming languages
- Strategizing organizational direction on emerging technology platforms and communicating the effectiveness to executive stakeholders
- Staying current and provide insight on cutting edge software approaches, architectures, and vendors.
- Ensuring that non-functional requirements such as security, performance, maintainability, scalability, usability, and reliability are being considered when architecting solutions.
- Keeping job knowledge up-to-date by studying new development tools, programming techniques, and computing equipment; participating in educational opportunities; reading professional publications; maintaining personal and professional networks; participating in professional organizations.
- Maintaining and upgrading the software following deployment
- Overseeing and guiding the analyzing, writing, building, and deployment of software

UNIVERSITY OF JOS HEALTH SERVICES **Oct. 2019 – Feb. 2020**

IT Support

- Helping health workers resolve technical challenges
- Resolving students failed payment on the Health management system
- Training health workers on how to use the health management system
- Installing applications and configuring systems to enable health workers work effectively.

CLEAR CODE LABS, LAGOS, NIGERIA **Oct 2016 – June 2017**

Full Stack Software developer

- Designing and deployment of our database
- Ensuring the entire stack is designed and built for speed and scalability
- Integrating our front-end UI with the constructed API
- Design and implementation of continuous integration and deployment
- working with graphic designers and converting designs to visual elements.
- Understanding and implementation of security and data protection.

- Collaborating with the rest of the engineering team to design and launch new features.
- Maintaining code integrity and organization.
- Using code versioning tools for project versioning
- Seeing through a project from conception to finished product.
- Participating in the design and creation of scalable software
- Writing clean, functional code on the front- and back-end
- Testing and fixing bugs or other coding issues
- Writing technical documentation

ICT DIRECTORATE, UNIVERSITY OF JOS, NIGERIA Sept. 2014 – 02/2015
IT Internship
• Development of web application for the school bursary
• Online registration of JAMB candidate
• Support for fresher registration and online payment

LEADERSHIP SKILLS/VOLUNTEER ACTIVITIES

- Technical Support on University of Jos Health services Hospital management system (10/2019 – 02/2020)
- Joint Admission and Matriculation board(JAMB) Protoc(Technical supervision) (2018 – present)
- Curriculum development and technical advice, Deaf Tech foundation Nigeria, a Non governmental organisation for speech and hearing impaired persons (2017 – present)
- Team Leader University of Jos Team, Google Online Marketing Challenge 2018
- Class/Course Representative of Electrical/electronics department students 2008 set
- Team Leader Team Crystal: University of Jos team in Hack Jos Competition
- Group leader in many Group course work in Undergraduate and Master's Program
- Candidate enrollment in University of Jos JAMB Registration Center
- Teaching 100 level computer science students and 200 library and information science technology students introduction to computer science Cs101 using python programming language
- Teaching 200 level zoology Introduction to programming using C++ programming language
- Teaching 200 level computer science students introduction and basic electronics designs and simulation using protus simulator
- Teaching 200 level Computer Science students MIPS assembly language programming using Qtspim

- Teaching 3 deeper life Bible church youths on how to program using python programming language
- Deeper Life youth summer holiday lesson resource person
- Deeper Life children summer holiday program resource person

EXTR-ACURRICULAR ACTIVITIES

- Playing or watching soccer
- Reading business development books

REFERENCES

- Prof. N.V Balamh, Computer Science, University of Jos, blamahn@unijos.edu.ng
- Prof. Ishaya Tanko, Computer Science, University of Jos, ishayat@unijos.edu.ng
- Dr. Gurundima Nentawe, Computer Science, University of Jos, yusufn@unijos.edu.ng