

# KANU VICTOR IKENNA

Address: Kumoh National Institute of Technology, Gumi, South Korea |

Email: [xavierkanu@yahoo.com](mailto:xavierkanu@yahoo.com) | LinkedIn: [Xavier Victor Kanu](#) | Google Scholar: [Victor Ikenna Kanu](#) | Github: [Xaviwho](#)

## OBJECTIVES

---

A graduate student exploring the intersection of blockchain technology and proteomics, investigating decentralized solutions for biochemical challenges such as proteomic data sharing, and the application of computational tools to amyloid and misfolded proteins. With a strong background in biochemistry and growing expertise in blockchain and computational biology tools, I aim to leverage emerging technologies to drive scientific collaboration and innovation in biomedical research.

## EDUCATION

---

**Kumoh National Institute of Technology**, Gumi, Gyeongsangbuk, South Korea

- Master of Engineering, ICT Convergence Engineering | 4.42/4.5 [ Inview] Sept. 2024 – present

**University of Lagos**, Akoka, Lagos, Nigeria

- Bachelor of Science, Biochemistry | CGPA: 3.90/5.0 Nov. 2015 – Jan. 2020

**Yaba College of Technology**, Yaba, Lagos, Nigeria

- National Diploma, Food Technology | CGPA: 3.23/4.0 Jul. 2013 – Nov. 2015

**The Bridge Program**, Lagos, Nigeria

- Entrepreneurial Leadership July – Sept 2016

## RESEARCH EXPERIENCE, PUBLICATIONS AND PRESENTATIONS

---

### Manuscript published/under review.

1. **Kanu, V.I.**, Ajakwe, S.O., Kim, D.S. PureProtX: Verifiable Consensus AI–Docking Virtual Screening with Target-Dependent Hybrid Optimisation, 2026. (Under review)
2. Ajakwe, I.U., **Kanu, V.I.**, Ajakwe, S.O., Kim, D.S. PredBlock: A Physics-Informed AI and Blockchain Framework for Integrity Verification in CO<sub>2</sub> CCS Pipelines Optimization. (Under review)
3. **Kanu, V.I.**, [Ajakwe, I.U.](#), [Ajakwe, S.O.](#), [Kim, D.S.](#) Deterministic Protein Structure and Binding Site Analysis through Blockchain-Integrated Workflow Verification, 2025. *ICT Express*
4. **Kanu, V.I.**, [Ajakwe, I.U.](#), [Ajakwe, S.O.](#), [Kim, D.S.](#) Offline-Capable AI–Blockchain Architecture for Biochemical Threat Detection in Mission-Critical MANET Environments, 2025. *IEEE Internet of Things*
5. [Ajakwe, I.U.](#), **Kanu, V.I.**, [Ajakwe, S.O.](#), [Kim, D.S.](#) eBCTC: Energy-Efficient Hybrid Blockchain Architecture for Smart and Secured K-ETS, 2025. *Cleaner Engineering and Technology*, 101084
6. **Kanu, V.I.**, [Isong, J.](#), [Ajakwe, S.O.](#), [Kim, D.S.](#) ProtChain: Blockchain-Secured IoT Data Provenance for Biomedical and Scientific Workflows, 2025. *Peer J Computer Science*
7. [Ihejirika, M.](#), [Osaretin, A. T. E.](#), [Imaga, N. A.](#), **Kanu, V. I.**, & [Edmunds, P. O.](#). Phytochemical and antioxidant profiling of aqueous and ethanol extracts of *Curcuma longa* and *Cinnamomum zeylanicum*, 2022. *International Journal of Advance Biochemical Research*.

### Conference Proceedings

1. **Kanu, V.I.**, Ajakwe, S.O., Kim, D.S. BioPassport: A Policy-Enforced Blockchain-Credential Architecture for Tamper-Evident Biomaterial Provenance. In *8th edition of the IEEE International Conference on Blockchain and Cryptocurrency (Accepted and to be presented) in Brisbane, Australia, 1-5 June 2026.*

1. **Kanu, V.I.**, Ajakwe, S.O., Kim, D.S. VeraComm: Verifiable Communication Protocol for AI-Based Drug Screening using Blockchain. In *8th International Conference on AI in Information and Communication, Tokyo, Japan, Feb 24-27, 2026*
2. [Kanu, V.I., Ajakwe, S.O., Kim, D.S.](#) PureProt: An AI-Blockchain Enabled Virtual Screening Platform for Drug Discovery. In *16th IEEE International Conference on ICT Conference, ICTC, Jeju Island, South Korea, Oct 2025.*
3. **Kanu, V.I.**, Ajakwe, I.U., Ajakwe, S.O., Kim, D.S.. Tamper-Resistant AI-Blockchain-Driven Biochemical Threat Detection in Disconnected Tactical MANETs. In *Young Scholars Workshop (YSW), IEEE Military Communications Conference (Accepted and to be presented) in October 6-10, 2025.*
4. [Kanu, V.I., Isong, J., Ajakwe, S.O., Kim, D.S.](#) Blockchain-Enabled Framework for Efficient and Interoperable Proteomic Data Management. In *International Conference on Ubiquitous and Future Networks (ICUFN), Lisbon, Portugal, July 6-11, 2025 [Online Presentation]*
5. **Kanu, V.I.**, Ajakwe, S.O., Kim, D.S. Blockchain-Verified Deterministic Framework for Protein Structure and Binding Site Analysis in Drug Discovery Distributed System. In *Korean Institute of Communications and Information Sciences (KICS) Summer Conference 2025, Jeju Island, South Korea, June 18-20, 2025*
6. [Kanu, V.I., Isong, J., Ajakwe, S.O., Kim, D.S.](#) Microservices Architecture for Blockchain-Based Proteomic Data Storage System Integrated with PDB and UniProt. In *Korean Institute of Communications and Information Sciences (KICS) Winter Conference 2025, Pyeongchang, South Korea February 5-7, 2025*
7. Nnadiokwe, C.A., **Kanu, V.I.**, Akor, G., Kim, D.S. (2025). Blockchain-enabled Secured Light Weight Data Management in Smart Factories. In *Korean Institute of Communications and Information Sciences (KICS) Winter Conference 2025, February 5-7, 2025*
8. **Kanu, V.I.**, Ajakwe, U.I., Ajakwe, S.O., Lee, J.M., Kim, D.S. Anthropomorphic and Accountable AI-Driven Power Generation and Distribution System. In *KICS Fall Conference 2025, November 20-22, 2024*
9. [Kanu, V.I., Ajakwe, S.O., Lee, J.M., Kim, D.S.](#) Blockchain Technology in Protein Folding: Enhancing Data Sharing and Collaboration. In *15th IEEE International Conference on ICT Conference, ICTC, October 16-18, 2024. doi: 10.1109/ICTC62082.2024.10826960*

### Seminar Presentations

1. R Tapwal, S Misra, SK Pal. UtilityChain: Dynamic Resource Allocation for Mining and Servicing in Blockchain System. In *IEEE Transactions on Services Computing, 2023. Presented 2024. 09.11*
2. AM Yakubu, YPP Chen. A Blockchain-based Application for Genomic Access and Variant Discovery using Smart Contracts and Homomorphic Encryption. *Published in Elsevier Future Generation Computer Systems, 2022. Presented 2025. 03.20*
3. U Demirbaga, GS Aujla. MapChain: A Blockchain-Based Verifiable Healthcare Service Management in IoT-Based Big Data Ecosystem. *Published in IEEE Transactions On Network And Service Management, Vol. 19, No. 4, December 2022. Presented 2025. 07. 10*
4. R Wang, C Xu, X Zhang. Toward Materials Genome Big-Data: A Blockchain-Based Secure Storage and Efficient Retrieval Method. *Published in IEEE Transactions on Parallel and Distributed Systems, 2024. Presented 2025.09. 04*
5. XX Du, MY Liu, YH Sun. Segmentation, Detection, and Tracking of Stem Cell Image by Digital Twins and Lightweight Deep Learning. *Published in Computational Intelligence and Neuroscience, 2022. Presented 2026.03. 02*

### Book Chapter

1. Okafor, C.I., **Kanu, V.I.**, Akor, C.G., Lee, J.M., Kim, D.S. Autonomous Intelligent Vehicles: An Overview. In *Blockchain For Security of Autonomous Intelligent Vehicles*, to be published in *Springer Nature* {Major Revision}

### Lab Projects

**Tech Lead, HiTex**, Secure collaborative LaTeX writing tool built on blockchain (Purechain)

|  |                     |
|--|---------------------|
| <b>Tech Lead, ChainPilot</b> , a blockchain abstraction platform that would facilitate the adoption of the Lab's blockchain network - Purechain. | Aug-Nov. 2025       |
| <b>Technical Paper Lead, PureCertificate</b> , certificate protection and tampering verification through blockchain                              | Mar. 2024 - present |

### Other Paper Submissions

Victor Ikenna Kanu. A proposed solution that conveys how the nature of work is changing and what the Nigerian Government can do to prepare and support its workforce. A Digital Artifact submitted to the World Bank Group's MOOC on EDx <https://sites.google.com/view/da-futureofwork/home>

### ACADEMIC AWARDS, HONORS, AND ACHIEVEMENTS

---

|  |            |
|--|------------|
| <b>Excellent Paper Award, ICAIIC 2026, Tokyo Japan</b> , presented by the ICAIIC TPC                   | Feb. 2026  |
| <b>Grand Prize Winner, Gumi Industrial Complex Paper Contest</b> , presented by KICS                   | Dec. 2024  |
| <b>Best Essay Award</b> , presented by Gyeongbuk Provincial College                                    | Aug. 2024  |
| <b>K-GKS Scholarship</b> , a full-ride graduate scholarship provided by the Korean Government          | July. 2024 |
| <b>The Lead Student Innovators Award</b> , presented by the Vice-Chancellor of the University of Lagos | Sept. 2019 |
| <b>Best Speaker Award, Biochemistry Inter-Level Debate</b> , presented by Biochemistry Department      | Oct. 2018  |
| <b>The Most Viable Idea Prize</b> ; presented by The Bridge Program.                                   | Sept. 2016 |
| <b>Best Group Presentation</b> , presented by the Entrepreneurial Development Program, Yabatech.       | Aug 2015   |

### PROFESSIONAL AFFILIATIONS

---

- **Member**, Korean Institute of Communications and Information Sciences (KICS)
- **Member**, Nigerian Institute of Food Science and Technology (NIFTS)
- **Member**, Nigerian Society of Biochemistry Students (NSBS)

### TEACHING/ADMINISTRATIVE EXPERIENCE

---

|   |                      |
|---|----------------------|
| <b>The Bridge Program</b> - Entrepreneurial Leadership Facilitator  | Aug 2021 & Aug 2022  |
| <ul style="list-style-type: none"> <li>● Facilitated sessions in Empathy &amp; Feedback, Identity &amp; Mental Models, Proactivity, and Leading Change to the assigned class of students selected from 102 universities in Nigeria in their journey to be program fellows.</li> <li>● Taught classes on Negotiations, Context Awareness &amp; Needs Identification, and Leading Self to the assigned class of students selected from 102 universities in Nigeria in their journey to be program fellows.</li> </ul> |                      |
| <b>Breakthrough Tutorial</b> - Biology and Chemistry Tutor  | June 2013 – Mar 2022 |
| <ul style="list-style-type: none"> <li>● Prepared over 100 students in Biology and Chemistry for national secondary school and university entrance examinations; the current passing rate is at 90%.</li> </ul>   |                      |
| <b>Elizade University ELP</b> - Administrative Assistant  | June 2013 – Mar 2022 |
| <ul style="list-style-type: none"> <li>● Supported the program facilitator in preparing teaching and training documents for the ELP lecturers of Elizade University, Ondo State.</li> </ul>   |                      |

### WORK EXPERIENCE

---

|   |                    |
|---|--------------------|
| <b>IXO Gadgets</b> – Product Researcher   | Feb 2023– Jun 2024 |
| <ul style="list-style-type: none"> <li>● Conducted thorough market research, including taking surveys, reading and perusing tech gadget releases and doing desktop research, which then developed into an ongoing holistic report compendium of about 50 products.</li> <li>● Collaborated and strategised with the company founders and the marketing team on new trends and demographics to target with with Ads and marketing. This synergy has resulted in a 30% sales jump in 2 months.</li> <li>● Planned and assisted with new product releases, identified new market opportunities and relayed this information to the Manager.</li> </ul> |                    |

- Future Females Invest** – Programme and Business Development Associate Feb 2021– Aug 2022
- Supported business development by writing proposals and preparing presentation slides.
  - Researched over 1000 targeted campaigns for partnerships, business development, thought leadership, and speaker confirmation.
  - Developed and curated new programs that best suited the objectives of the business while researching over 600 organisations and individuals to find new opportunities, which resulted in a 60% increase in new partnerships and a 20% increase in revenue.

- Seven-Up Bottling Company** - Quality Control Intern Oct. – Dec. 2018
- Inspected output samples using industry-appropriate methods, such as comparing standards, measuring dimensions, and examining the functionality.
  - Checked that the assembly or production line adheres to standards and procedures and complies with legal requirements.
  - Proposed improvements to the production process.

- Lagos State Ministry of Health** - Nutrition Support Intern Apr. – Jul. 2015
- Organised and facilitated vaccination and immunization programs for children (0 months to 2 years), resulting in the drop of polio cases to 0.1% that year which eventually led to being certified Polio-free State.
  - Advocated for exclusive breastfeeding of children under the age of 2, based on research findings.

### LEADERSHIP/VOLUNTEER EXPERIENCE

- Program Manager & Selection Lead**, Professor Ogundipe Innovative Challenge Aug. 2019 - Feb. 2020
- Program and Project Manager**, The Bridge Program (Educate-to-Employ program) Dec 2017 - Dec. 2018
- Strategic Planning Lead**, KidsAide Initiative May - Dec. 2018

### SKILLS AND ABILITIES

**Languages:** English, Yoruba, and Igbo Language: Strong reading, writing, and speaking competencies. Korean and Spanish: Introductory level at reading, speaking and writing.

**Software/Coding:** Data Cleaning. Molecular Dynamics Simulations. Data Visualization, SQL, Sequence Alignment, Latex, Github, Microsoft Office Suite (Word, Excel, PowerPoint, etc.)

**Soft Skills:** Academic Research, Teaching, Project Management, Leadership, and Team Management

### COURSES AND CERTIFICATIONS

**International English Language Testing System (IELTS)** May 2024 - May 2026

**Total Score = 7.5**

- Speaking: 7.5
- Listening: 7.5
- Reading: 8.0
- Writing: 6.5

July 2022 - June 2023

**University of California San Diego Bioinformatics Coursera** Scholarship (Certification)

- Investigated DNA replication to determine where the genome replication begins -OriC.
- Determined the sequence of amino acids making up one of the investigated antibiotics using brute force algorithms.
- Applied popular bioinformatics software tools to sequence the genome of a deadly Staphylococcus bacterium that has acquired antibiotic resistance.

Mar 2021 -Feb 2022

**Google Data Analytics Professional Certificate Coursera** Scholarship (Certification)

- Explored a variety of real-world business scenarios to support an understanding of questioning and decision-making.
- Discovered how to identify different types of bias in data to help ensure data credibility. Aug. - Sept. 2021

- Applied basic SQL functions for cleaning and transforming data

#### **Hackbio Bioinformatics Virtual Internship Certificate**

- Learned and applied basic Python codes in analyzing biodata.
- Investigated the target protein of *Mycobacterium tuberculosis* and the potential and existing drugs using molecular docking and other bioinformatics software tools.
- Over 400 phyto alkaloids that can serve as potential inhibitors to bacterial meningitis-causing pathogens were investigated using *Insillico* analysis.

#### **REFERENCES**

---

**Simeon Okechukwu Ajakwe, Ph.D.** (Research Mentor)

*Associate Professor, The Smart Computing Dept,  
Kyungdong University, Global Campus, South Korea.*

[simeon.ajakwe@kumoh.ac.kr](mailto:simeon.ajakwe@kumoh.ac.kr)

**Charles Pickens, Ph.D.** (Mentor)

*Professor, Center for Cognitive and Neurobiological  
Approaches to Plasticity (CNAP), Kansas State University*

[pickens@ksu.edu](mailto:pickens@ksu.edu)

**Williams Paul Nwadiugwu, Ph.D.** (Character/Mentor)

*Professor, Bharti School of Engineering,  
Laurentian University, ON P3E 2C6, Ontario, Canada.*

[WNwadiugwu@laurentian.ca](mailto:WNwadiugwu@laurentian.ca) / [williams.nwa@gmail.com](mailto:williams.nwa@gmail.com)

**Ridwan Abiodun Lawal, Ph.D.** (Undergrad Supervisor)

*Associate Professor, Dept. of Biochemistry  
University of Lagos, Akoka-Yaba, Lagos, Nigeria*

[alawal@unilag.edu.ng](mailto:alawal@unilag.edu.ng)