











# Ahmeed A. Yinusa, Ph.D.







✉ aay2g@mtmail.mtsu.edu     ahmeed-yinusa     <http://ahmeedyinusa.com/>  
 +1617-447-7095     Google Scholar     Ahmeed1983



## Education

- 2022 – Current     **Ph.D., Middle Tennessee State University, US** in Computational and Data Science.  
**Relevant Modules:** *System Dynamics Modeling (SDM), Machine Learning, Deep Learning, Data Analytics, Cloud Computing, Numerical Computing, Parallel Processing (HTC).*
- 2020 – 2021     **M.Sc., Middle Tennessee State University, US** in Engineering Technology (CGPA: 4.00/4.00).  
**Relevant Modules:** *Six Sigma, Project Management, Safety Planning, Lean Manufacturing, Renewable Energy, Research Methodology, System Dynamics Modeling (SDM).*
- 2015 – 2016     **M.Sc., University of Lagos, Nigeria** in Systems Engineering (CGPA: 4.00/5.00).  
**Relevant Modules:** *Systems Identification Optimization and Control, Simulation and Modelling, Knowledge-Based Systems and Artificial Intelligence.*
- 2006 – 2010     **B.Sc., University of Lagos, Nigeria** in Applied Physics Electronics (CGPA: 4.20/5.00).  
**Relevant Modules:** *Fundamentals of Electrical Engineering, Electrical and Magnetism, Introduction Information Processing Method, Electronics, Laboratory Practical, Electro-dynamics.*
- 2004 – 2006     **Diploma, Lagos State Polytechnic, Nigeria** in Electrical Electronics Engineering (CGPA: 3.61/4.00).  
**Relevant Modules:** *Fundamentals of Electrical Engineering, Power Systems and Control (PSC), Circuit Theory and Analysis (CTA).*

## Skills

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| Languages                    |  Strong reading, writing, and speaking competencies in English and Yoruba.                         |
| Coding                       |  Python, C++, Linux, $\LaTeX$ .  |
| Databases                    |  MySQL, MongoDB.   |
| Modeling/Simulation Software |  PyTorch and Lightning, TensorFlow and Keras, Vensim, AnyLogic, Gurobi, MATLAB, Tableau, Power BI. |
| Web and Mobile Dev           |  HTML, CSS, JavaScript, PHP, WordPress, Joomla, Flutter, UX/UI Design, Graphic Design.             |
| Misc.                        |  Academic research, teaching, training, consultation, $\LaTeX$ typesetting, publishing.            |

## Academic and Technical Experience

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2022 – Current

📖 **Graduate Research and Teaching Assistant**, Middle Tennessee State University.

- Managing Systems Engineering Lab, and ensuring efficient operations and resources.
- Implementing PyTorch, TensorFlow, and Keras frameworks for machine learning and deep learning in data science.
- Applying modeling and simulation techniques such as system dynamics modeling, agent-based modeling, and mathematical programming to address challenges in **healthcare, public health, manufacturing, finance, energy and resource management, transportation, education, water resources, and environmental sustainability**.
- Performing data analysis and visualization using industry-standard tools, including Tableau and Power BI.
- Provide mentorship to graduate students, focusing on the practical applications of modeling and simulation techniques.
- Collaborate with faculty members and research teams to develop and publish scholarly papers.

2020 – 2021

📖 **Graduate Teaching Assistant**, Middle Tennessee State University.

- Assisted in teaching ET-3650 (Introduction to Microprocessor), and ET-3630 (Electronics) Laboratory classes to undergraduates.
- Graded laboratory procedures and coursework.
- Assisted in the coordination of exams, tests, and projects.
- Coordinated laboratory apparatus and equipment for project procedures.

2017 – 2019

📖 **Physics Laboratory Specialist and Instructor**, Crescent Schools, 1004, Housing Estate, Victoria Island, Lagos.

- Involved in the training and instruction of laboratory procedures to students.
- Involved in analyzing equipment malfunctions and optical and electrical equipment repairs.
- Involved in the setup, modification, service, adjustment, and repairs of laboratory apparatus and equipment.
- Involved in the laboratory equipment, materials, and supplies inventory.
- Organized exams and tests for the students.

## Academic and Technical Experience (continued)

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- 2013 – 2016    **Information Technology (IT) Specialist**, Doland Resources and Services Limited.
- Operated, maintained, and repaired desktops and computer hardware.
  - Troubleshot computer networks relating to Windows operating systems and applications.
  - Configured LAN/WAN operations in the company.
  - Installed new computer software and hardware components.
  - Resolved I.T. issues that colleagues had with their systems and software.
  - Developed and maintained the company’s website.
- 2012 – 2013    **Physics and Mathematics instructor** , Kembos College, Isolo, Lagos, Nigeria.
- Involved in teaching physics and mathematics.
  - Graded exams and tests.
  - Prepared students for both external terminal and international examinations.
- Internship, 2009    **Electronics and Safety technologist** , Link-Strides Security Systems Limited, Nigeria.
- Installed and maintained Closed-Circuit Television (CCTV) cameras, Burglar alarm systems, Fire alarm systems, Fire suppression systems, Automatic extinguishing systems (FM200), PABX, Audio-video systems, Access control doors, and Biometric doors.
  - Purchased electronic components for installation and reviewed accessories bills and supplies.
- Internship, 2005    **Electrical Maintenance Technician**, Femstar Bottling Company Limited, Nigeria.
- Installed, troubleshot and maintained electrical motors used in controlling factory conveyors.
  - Laid electrical cables for installation and lighting purposes in the company.
  - Analyzed electronic and electrical circuits and repaired electronic devices.
  - Maintained electrical systems and installed conduit cables for new electrical projects.
  - Worked closely with the mechanical department team to weld faulty and broken machinery.

## Research Publications

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### Journal Articles



- 1 O. Ebenezer, T. Thomas, S. Tingting, A. Yinusa, S. Hamdan, and S. Poudel, “Minimization of high computational cost in data preprocessing and modeling using mpi4py,” *Articles*, pp. 1–5, 2023.

- 2 A. Yinusa and M. Faezipour, "Optimizing healthcare delivery: A model for staffing, patient assignment, and resource allocation," *Applied System Innovation*, vol. 6, no. 5, p. 78, 2023.
- 3 A. Yinusa, M. Faezipour, and M. Faezipour, "A study on ckd progression and health disparities using system dynamics modeling," *Healthcare*, vol. 10, no. 9, p. 1628, 2022.





## Miscellaneous Experience

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### Academic Certification of Participation

- 2021  **The Institute of Industrial and Systems Engineers (IISE) Annual Expo.** Abstract submission and Master's degree Thesis presentation. Awarded by IISE, US.
- 2020  **Scholars' Week University-wide Poster exposition .** Awarded by Middle Tennessee State University, US.





### Awards and Achievements

- 2009  **Member of Parliament, Faculty of Science, Students Association,** University of Lagos, Akoka, Lagos, Nigeria.
- 2006  **President, Electrical/Electronic Engineering Students Association ,** Lagos State Polytechnic, Ikorodu, Lagos, Nigeria.
- 2011  **Corps members' liaison officer (CLO), NYSC,** Federal Government College, Ilorin, Kwara State, Nigeria.  
 **General Secretary (G.S),** Management information system (MIS), Community development services, NYSC.

### Certification

- 2021  **Google IT Support Professional Certificate.** Awarded by Google, US.  
 **Six Sigma Green Belt Certification.** Awarded by Middle Tennessee State University, US.  
 **Lean Manufacturing Certification.** Awarded by Middle Tennessee State University, US.  
 **Machine Learning with Python: Foundations.** Awarded by LinkedIn, US.  
 **Learning Arduino:Foundations.** Awarded by LinkedIn, US.
- 2020  **Academic Certification of Participation.** Awarded by Middle Tennessee State University, US.
- 2014  **Wireless Networking.** Awarded by KITS Technologies, Nigeria.
- 2011  **Dreamweaver Certified (Website Design).** Awarded by NIIT, Nigeria.

### Membership

-  **INCOSE.** International Council on Systems Engineering.
-  **IISE.** Institute of Industrial and Systems Engineers.
-  **IEEE.** Institute of Electrical and Electronics Engineers.
-  **SDS.** System Dynamics Society.

## References

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**Dr. Saleh M. Sbenaty**

Department: Engineering Technology

Email: saleh.sbenaty@mtsu.edu

## References (continued)

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Tel: 615-898-2966

Address: Room 175, Voorhies Engineering Technology (VET)  
MTSU Box 19, Murfreesboro, TN 37132.

**Dr. Misa Faezipour**

Department: Engineering Technology

Email: [misagh.faezipour@mtsu.edu](mailto:misagh.faezipour@mtsu.edu)

Tel: (615) 898-2110

Address: Room 244, Voorhies Engineering Technology (VET)  
MTSU Box 19, Murfreesboro, TN 37132.