

Curriculum Vitae  
**FRANCIS EMMANUEL NWEKE**  
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## RESEARCH INTERESTS

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I am currently working on building machine learning models for healthcare.

Topics of interests include:

- Machine learning techniques for real world problems.
- Deep learning (artificial neural networks).
- Natural language processing

## EDUCATION

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**Doctor of Philosophy in Computer Science** Aug 2023 – present  
Kennesaw State University, USA

**Bachelor of Science in Computer Science** Sept 2015 – May 2019  
Ghana Institute of Management and Public Administration (GIMPA)

## HONORS AND AWARDS

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**First Class Honors in Computer Science** May 2019

**Best Graduating Student in Information and Communication Technology (ICT) in High School** July 2015

## RESEARCH EXPERIENCE

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**Graduate Research Assistant** Jan 2023 – present  
Kennesaw State University, USA  
Advisor: Dr. Hafiz Khan

**Student Project Repository and Allocation System** April 2019  
Ghana Institute of Management and Public Administration, Ghana  
Advisor: Dr. Nana Kwame Amagyei

- Improved my writing and research skills.
- Improved my communication skills.

**An Open-Source Bus Reservation System** Nov 2018  
Ghana Institute of Management and Public Administration, Ghana  
Advisor: Dr. Joseph Budu

- The research focused on benefits and challenges in open-source projects taken into consideration were past open-source research projects.

## RELEVANT PROJECTS

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**911 BH Response Project:** I am using ML models to predict mental health issue.

**Automated Detection of Letters from Brain Signals:** I revealed that it is possible to detect individual letters from EEG signals using non-invasive approaches, demonstrating the potential of thought-to-text technology to help a wide range of people and applications.

**Identify the Apparels:** Participated in the Fashion MNIST challenge. I implemented a Convolutional Neural Network for the multi-class classification problem.

**Heart Diagnosis App:** Built a multilayer perceptron model for heart disease diagnostics (provided to users as a web app).

**Customer Segmentation:** Used a clustering algorithm (KMeans) to group mall customers into clusters.

**Machine Learning for Agriculture:** I used machine learning techniques in agriculture for a hackathon.

**Handwritten Digit Recognition:** On the MNIST dataset, this project uses a multilayer perceptron network, a convolutional neural network (CNN), and a complex CNN to recognize handwritten digits.

**Sentiment Analysis:** It is a form of text analytics that uses natural language processing (NLP). I analyzed text (sentence) for the emotions conveyed in it.

**Text Summarization:** Used NLP for abstractive summarization for an article.

**4WD Robot Vehicle:** My team created and built a 4WD Robot with obstacle avoidance capabilities and project documentation inclusive.

**Supervised/Unsupervised Learning:** I solved several problems using ML techniques (clustering, classification and regression) by utilizing Python libraries such as scikit-learn, pandas, matplotlib, numpy and tensorflow.

**\*\*Note:** This is not an exhaustive list; for more projects, please visit my [GitHub](#)

## PROFESSIONAL AFFILIATIONS/WORK EXPERIENCE

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<b>Graduate Research Assistant</b> Kennesaw State University, USA	Dec 2023 – present
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<b>Graduate Teaching Assistant (FYE)</b> Kennesaw State University, USA	Aug 2023 – Dec 2023
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<b>Software and Database Engineer</b> Datalinks Finance and Systems Consulting Limited <ul style="list-style-type: none"><li>• Member of the research and development (R &amp; D) team.</li><li>• Responsible for backend and database development of a core banking application (Eazybank4), and Business Intelligence (BI) development.</li></ul>	Nov 2019 – July 2023
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## SKILLS

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**Programming:** I have worked extensively with these programming languages: C#, Python, Java and MSSQL.

**Applications:** Visual Studio/VS Code, Anaconda, Google Colab, Mendeley, Overleaf and Microsoft Office Suite.

**Soft Skills:** Collaboration, Problem Solving, Excellent Communication, Time-management and Critical Thinking.