

# Kenechi Franklin Dukor

## Education

2012–2016 **University of Lagos – BS(Hons), Mechanical Engineering.**  
GPA: 4.38/ 5.0

2017–2019 **Other Certifications.**

- Machine Learning, Coursera
- Deep Learning Nanodegree, Udacity
- Deep Reinforcement Learning Nanodegree, Udacity

## Skills

**Programming** Python, C#, ASP.NET, VueJs(basic), HTML, CSS, Javascript, LaTeX

**Tools** Git, PyTorch, Tensorflow 2.0, Scikit-Learn, NumPy, Pandas, VS Code, Linux, Jupyter Lab

**Planning** Agile, SDLC

**Tools** Github, Bitbucket, Microsoft Visio, Notion, Trello

## Work Experience

Oct. 2018 – **Wapic Insurance Plc, SOFTWARE ENGINEER**

- Present
- Developed applications using C#, ASP.NET, React and Python, that automate the insurance processes for retail and corporate customers.
  - Mapped out the claims process in preparation for a digital transformation, as well as developed a process flow which suggests improvements on the current process.
  - Developed a ChatBot to enable customer engagement on the company's website while human agents are offline.
  - Developed a car classification model to ensure images uploaded during purchase of motor insurance policy are cars.

Jan. 2018 – **Herzer Research Group, University of Lagos, RESEARCH INTERN**

- June 2018
- Learned to develop and solve complex real life problems using mathematical representation.
  - Applied the Galerkin's Method of weighted residuals to solve problems of heat flow in surfaces.

Jan. 2017 – **San-Latunag Limited, DESIGN ENGINEER**

- May 2017
- Analysed and designed HVAC&R systems for Residential and Commercial building using AutoCAD and some other special tools for estimating cooling load.
  - Supervised the installation of the HVAC units on site.
  - Developed an excel sheet for the company, which contains a compilation of the relevant resources for quick computation of cooling load estimate for a building.

## Research Experience

**Thermal Performance Analysis of Rough Micro-Fins with Variable Cross-Sections [Published].**

- **Goal:** Develop a mathematical models that describes the behavior of smooth and rough micro fins of different shapes (cylindrical, rectangular, hyperbolic and parabolic) under temperature dependent thermal properties
- **Method:** Galerkins's Method of Weighted Residuals was used as a method of solution (analytical method) to solve the models. The result were compared with experiments results.
- **Outcome:** The rough micro-fins performed better at heat removal. This is because of roughness can be seen as extended fins.
- **Recognition:** A paper which describes the research for cylindrical shaped fin was published at International Journal of Manufacturing and Material Engineering [paper]

**Paper review: Assigning a Grade: Accurate Measurement of Road Quality Using Satellite Imagery by Gabriel Cadamuro, Aggrey Muhebwa and Jay Taneja , .**

- **Goal:** To review selected papers from ML4D at NeurIPS and possibly make improvements on the methods applied by the author. (This is an outcome AI Saturdays Lagos Research Track)
- **Outcome:** ongoing.

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## Leadership Experience

- Feb. 2020 – **Wapic Insurance IT Division, SOFTWARE DEVELOPMENT LEAD**  
Present
  - Lead the software team in the development of all platform and applications.
  - Liaised with the business owners on software to be built, their features and their respective timelines.
- Jan. 2019 – **AI Saturdays Lagos, CO-ORGANISER**  
Present
  - Liaise with the lead instructors of the different learning track, on what curriculum to be taught.
  - Ensure the availability of resources required for learning such as venue and internet.
  - Ensure that the students are learning and projects are completed students.
- Nov. 2015 – **ASHRAE, University of Lagos, PRESIDENT**  
Dec. 2016 *American Society for Heating Refrigeration and Air-Conditioning Engineers*
  - Managed the students branch activities and reported duly to the National branch and Region-at-large.
  - Conducted technical sessions for our members, organised events that invited experienced HVAC Engineers to our meetings.
  - Successfully increased the membership of the branch by about 30% and won a \$3000 ASHRAE scholarship for a student member.

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## Projects/Achievements

- **Machine Learning (Artificial Intelligence).**
  - Collated dataset of Nigerian currencies and implemented a Convolutional Neural Network model to classify Nigerian Currency using Fastai and obtained an average accuracy of 96%.
  - Implemented a Multi-Agent Reinforcement Learning model to play the game of tennis on Unity ML-Agents Tennis Environment, with an average score of 30 after 97 episodes.
  - Implemented a Convolutional Neural Network model to detect face emotion and obtained an average accuracy of 70%.
  - Achieved an outstanding Kaggle leader-board score in the Women in Data Science competition after implementing a Convolutional Neural network to predicts the presence of oil palm plantations in satellite imagery.
  - Implemented a reinforcement learning agent in the Unity ML-Agents Reacher Environment. The double-jointed arm agent learnt to maintain position at the target location in an observation space with 33 variables corresponding to position, rotation, velocity and angular velocity.
- **Software Development.**
  - Built a QR code attendance tracker app using google sheets as database. For low budget meetups, it keeps record of attendance with little effort. (soon to be open sourced)
  - Lead the development of all digital platforms in Wapic Insurance Plc., which includes the retail portal (*for retail purchases*), corporate portal (*for corporate purchases*), company website, and WapX Connect (*for internal fulfilment processes*);
- **Engineering.**
  - Together with a team of students, we designed and constructed an electric car using locally sourced materials.
  - Implemented a mathematical model that describes the thermal performance of different shape of micro-fins.

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## Volunteer Experience / Membership

### Organising Committee.

- Lagos NeurIPS meetup 2019
- AI Saturday Lagos (Over 200 attendees)

### Mentorship.

- National Youth Service Corp (2018)

### Teaching.

- Machine Learning (AI Saturdays Lagos)
- Data Science (AI Saturdays Lagos)

### Black in AI.

## Invited Talks and Tutorials

October 2019 **Invited Talk at Tensorflow Roadshow.**