# ABDULMALIK ADEYEMO

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# **EDUCATION**

**B.**Eng Computer Engineering

[08/2015 - 08/2021]

University of Ilorin, Ilorin, Nigeria

**GPA:** 4.68/5.0 (Top 1% out of over 9000 graduated students in 2021)

**Relevant Courses (Grades):** Artificial Intelligence and Applications (A), Software Engineering (A), Software Development Techniques (A), Engineering Mathematics II (A), Control Theory (A), Fuzzy Logic and Programming (A), Introduction to Robotics and Automation (A)

## **WORK EXPERIENCE**

## **Machine Learning Intern**

[01/2022 - 10/2022]

## National Center for Artificial Intelligence and Robotics, Abuja, Nigeria

- Implemented a convolutional neural network to detect the presence or absence of diabetic retinopathy from 85,110 preprocessed fundus images. <u>Link</u>
  - o Data cleaning and augmentation were performed on 85 GB of data saved in paperspace gradient storage, and an image classifier was trained on 85,110 image data.
  - o The algorithm had a specificity of 96.52% and a sensitivity of 93.41% when tested on 21,276 fundus images.
- Developed a state-of-the-art chest X-ray classifier by retraining a DenseNet model on 108,948 frontal-view X-ray images of 32,717 unique patients. Link
  - o Performed data exploration and image processing on all 108,948 X-ray images and eliminated patients with multiple records that appeared in both training and test datasets in order to prevent data leakage.
  - o Measured the diagnostic performance by computing the AUC (Area Under the Curve) for the ROC (Receiver Operating Characteristic) curve and visualized the model activity using GradCAMs
- Built a 3D U-Net model for brain tumor auto-segmentation from 484 3D magnetic resonance imaging (MRI) scans. Link
  - o Executed data exploration on 9GB of 3D MRI scans and created an interactive visualization across the layers of the images
  - o Applied the soft dice loss function for training the U-Net model, which was evaluated with a specificity of 99.60% and a sensitivity of 78.91%.
- Taught 12 interns in the implementation of python for artificial intelligence.

# Data Science Intern Hamoye AI, Remote

[07/2022 - 10/2022]

- Spearheaded a team of 20 interns in the development, evaluation, and deployment of a dementia prediction model based on a tabular dataset of 150 subjects aged 60 to 96, with a 91% accuracy. Link
- Built a multi-label images classifier for satellite image chips with atmospheric conditions and various classes of land cover/land use using tensorflow, with an f2 score of 90%. Link

### **Graduate Teaching Assistant**

[06/2021 - 09/2021]

## Robotics and Artificial Intelligence Nigeria, Ibadan, Nigeria

- Trained 9 interns on the internet of things using Arduino and ESP8266 micro controllers.
- Supervised 9 interns on the development of a cloud based home automation system and a smart irrigation system.

# **Undergraduate Research Assistant**

[10/2019 - 05/2021]

## Computer Engineering, University of Ilorin, Ilorin, Nigeria.

- Wrote a research proposal, reviewed literature, analyzed data, and reported findings on development of a semi-autonomous drone system for surveillance, security and package delivery.
- Led a team of 7 students in an undergraduate research project focused on the design and development of a semi-autonomous drone system for surveillance, security and package delivery.

## Undergraduate Intern Sheraton Abuja Hotel, Abuja, Nigeria.

[04/2019 - 10/2019]

- Conducted Consistent Analysis of Computer Systems to Determine if existing Components Meet the Hotel's Need and Perform Upgrades as Needed.
- Installed, Managed and Conducted Updates on Security Systems to help Detect and Prevent Virus Attacks on the Hotel's Computer Systems.

# **Undergraduate Intern**

[08/2018 - 11/2018]

RetailPoint Solutions LTD, Abuja, Nigeria.

 Programmed and Installed Point of Sales Systems in over 10 Business Hubs which Led to a 90% Increase in Operational Efficiency.

#### PROFESSIONAL DEVELOPMENT AND CERTIFICATIONS

Machine Learning Specialization - Stanford   DeepLearning.AI. Certificate	[07/2022 - 08/2022]
AI for Medical Diagnosis - Coursera   DeepLearning.AI. Certificate	[02/2022 - 03/2022]
Practical Deep Learning For Coders - FastAI. Link	[08/2021 - 01/2022]
Applied Data Science - WorldQuant University. Certificate	[09/2021 - 12/2021]
Python 3 Programming: Beginner To Pro Masterclass - Udemy. Certificate	[04/2019 - 07/2019]

#### **CONFERENCES AND PRESENTATIONS**

- Department of Surgery, University of Ilorin research day on "Emerging Technologies in Surgery, Implication for Training and Practice in Resource Poor Settings", A 4 minute presentation by **Abdulmalik Adeyemo**, National Center for Artificial Intelligence and Robotics. [7/10/2011]
- Deep Learning IndabaX conference on "Responsible AI in National Security and Healthcare".
- Exhibitor at Digital Nigeria Conference on "Digital Transformation: A path to sustainable digital economy"

#### LEADERSHIP EXPERIENCE

# CEO and Co-founder FundusAI, Abuja, Nigeria

[04/2022 - Present]

- Created and presented the company's pitch deck during the iHatch startup incubation interview, which resulted in the company being selected as one of the top 6 out of over 1000 interviewed startups.
- Represented the company in presenting pitch deck during the CWG-PLC pitch for transformation challenge and was awarded 1st runner-up out of 100+ contestants.

# AWARDS AND SCHOLARSHIP

Best intern award for the stage B data science track, Hamoye AI.	[09/2022]
Best graduating student, Department of Computer Engineering, University of Ilorin.	[08/2021]
First class honors award in Computer Engineering, University of Ilorin.	[08/2021]
Undergraduate scholarship award for the best student in Computer Engineering.	[2016 - 2021]

## **VOLUNTEERING EXPERIENCE**

# **Artificial Intelligence Tutor**

[08/2022 - 09/2022]

# NITDA STEM BOOT CAMP FOR KIDS, Abuja, Nigeria

• Tutored 156 kids aged 12 to 16 on how to build a facial recognition system using artificial intelligence

**Lead Tutor** [02/2018 - 07/2021]

## LearnWithMKTV, Ilorin, Nigeria

- Organized and tutored 20 classmates on difficult subjects, which helped them achieve academic success.
- Coached over 150 students on how to achieve academic success while maintaining a healthy social life.

## **SKILLS**

**Libraries and Frameworks:** Tensorflow, Keras, Pytorch, FastAI, Python, Scikit-learn, Pandas, Numpy, Matplotlib, Seaborn.

**Laboratory:** 3D Printer, CNC Machine, Laser Cutting machine, Soldering Iron, Raspberry Pi, Arduino, ESPs.

**Soft Skills:** Team Leadership, Independence of Thought, Civic Mindset, Innovative Thinking, self confidence.

Languages: English (Bilingual Proficiency), Yoruba (Bilingual Proficiency).