Bismarck Bamfo **Odoom**

Kumasi-Ghana

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Education

Kwame Nkrumah University of Science and Technology, Kumasi(KNUST)

Ashanti, Ghana

BSc. Computer Engineering - FIRST CLASS HONORS

SEPT. 2017 - SEPT. 2021

Skills

Programming Python, Julia, JavaScript
Tools Git, Linux, Numpy, PyTorch, TensorFlow, HuggingFace Transformers, OpenCV
Languages English, Akan(Twi), French

Experience

Department of Computer Engineering,KNUST

Kumasi, Ghana

Research and Teaching Assistant

OCT. 2021 - Present

- Assisting instructors in tutoring and grading the following undergraduate-level courses; ***Artificial Intelligence, Programming and Problem-Solving and Object Oriented Programming.***
- Currently researching effective ways of building high-quality **synthetic image datasets** for optical character recognition on **low-resource and endangered languages** to be able to digitize them.

Connected Devices Lab, KNUST

Kumasi, Ghana

Natural Language Processing Intern

JULY. 2020 - SEPT. 2020

- I worked on building **machine translation** models for some Ghanaian Languages(**Twi**, which is the most popular one).
- I built a parallel corpus of **Twi-English** translations by scraping websites.
- I built machine learning pipelines for easy training and evaluation of models.
- I designed, trained and evaluated baseline translation models on the dataset.

College of Engineering Innovation Center, KNUST

Kumasi, Ghana

Artificial Intelligence Student Instructor

NOV. 2019 - NOV. 2019

- I was an instructor during a student led workshop organized by the College of Engineering Innovation Center, KNUST to introduce students to artificial intelligence and machine learning.
- I led the lab sessions which taught participants how to build and train neural networks.
- Participants undertook a series of hands-on exercises including training image classifiers on the CIFAR-10 and Fashion MNIST datasets.

Connected Devices Lab, KNUST

Kumasi, Ghana

Affective Computing Intern

JULY. 2018 - SEPT. 2018

- I trained and evaluated machine learning models for **detecting and recognizing human emotions** using the FER-2013 dataset.
- Built machine learning pipelines for easy training and evaluation of models.

Academic Projects

Neural Machine Translation on Scene Text

MAR. 2021 - AUG. 2021

- Implemented a **scene text recognition system** using the **CRAFT** algorithm for text detection and a **ConvNet+BiLSTM+Attention** network for text recognition.
- Implemented a machine translation model using the **HuggingFace transformers API** to receive the output text from the scene text recognition model and translate it to other languages.

Facial Recognition Attendance Management System

FEB. 2020 - JULY 2020

- Designed and implemented a facial recognition system to automatically record the attendance of students in a classroom.
- Wrote APIs on the backend to make queries to an SQL database to fetch and store student details.
- Built a user-friendly frontend to enable users interact with the system.

Scholarships, Awards and Distinctions

GNPC Foundation Scholarship, 2020

2020

- Awarded a scholarship package for one academic year (2020/2021)

Excellent Student Award, 2021

2021

- Admitted to the Provost's list for the 2020/2021 Academic year

Excellent Student Award, 2020

2020

- Admitted to the Provost's list for the 2019/2020 Academic year

Excellent Student Award, 2019

2019

- Admitted to the Provost's list for the 2018/2019 Academic year

Volunteering

2020 **Student Volunteer**, Empirical Methods in Natural Language Processing (EMNLP)

2020 **Student Volunteer**, Neural Information Processing Systems(NeurIPS)

Competitions

2021	**Ranked 20 out of 63**, UmojaHack Africa 2021 1: DeepChain Antibody Classification Challenge (ADVANCED)	*Zindi*
2020	**Ranked 8 out of 81**, UmojaHack 1: SAEON - Identifying marine invertebrates (ADVANCED)	*Zindi*
2020	**Ranked 143 out of 338**, ICLR Workshop Challenge 1: CGIAR Computer Vision for Crop Disease	*Zindi*

Referees

Dr. Henry Nunoo-Mensah

KNUST, Kumasi

Faculty Member, Department of Computer Engineering

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