KWEKU ANDOH YAMOAH

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EDUCATION

Ashesi University	Berekuso, Eastern Region, Ghana
BSc. Computer Science	**Expected Date of Graduation: July 2022**

- Cumulative GPA: 3.95/4.00
- Relevant Courses: Machine Learning, Natural Language Processing, Multivariable & Linear Algebra, Data Science, Statistics, Research Methods, Algorithm Design & Analysis, Calculus I & II, Data Structures, Discrete Mathematics, Parallel & Distributed Computing and Software Engineering.

RESEARCH AND WORK EXPERIENCE

Faculty Intern– Ashesi University, Berekuso   **Aug 2022 - Present**
- Accepted Faculty Intern position with the Computer Science and Information Systems department as a Faculty Intern.
- Assisting in the teaching of the Introduction to AI class with Dr Korsah.

Capstone Thesis – Ashesi University, Berekuso   **Aug 2021 – May 2022**
- Explored the question, can ASV systems be fooled by deepfakes generated on African accents?
- Learned that the state-of-the-art ASV system can successfully enrol and authenticate speakers with African accented speech with reference to a ground truth audio
- Demonstrated that the state-of-the-art deepfake system struggles to generate deepfake audio of appreciable quality on African accents.
- Concluded from this research that ASV systems are less likely to be fooled by deepfake audio attacks generated on African accents

Engen Ghana – Pawpaw Street, East Legon   **Jul – Aug 2021**
Information Technology Summer Intern
- Redesigned and rebuilt the company website to give a competitive advantage over other firms.
- Gathered and cleaned company employee data and increased the efficiency of a formerly manual process by 80%.

Applied Methods Research Experience – College of Wooster, Ohio   **May – Jul 2021**
Research Associate
- Conducted costs, sales and profits analysis to present a framework on customer buying trends for a large grocery chain.
- Learnt and implemented RFM analysis to present new ways for segmenting customers.
- Generated insights from analytics which helped convert prospective loyal customers.
- Generated targeted marketing programs based on research conducted to increase the basket size of customers.

PROJECTS

ASR in Financial Data-Entry Applications   **May 2021**
Team Member (ASR Model Developer)
- Built an automatic speaker recognition (ASR) model to improve the usability of data entry applications.
- Used Quartznet15x15 model from NeMo to build the ASR model from scratch using LibriSpeech data.
- Fine-tuned the model using collected speech data that fit the target domain.
- Model achieved a Word Error Rate of 24.2% on the test set.

Text Classification using Machine Learning   **May 2021**
Team Member
- Worked in a team of two to implement four sentiment classification models using different approaches in Machine Learning.
- We discovered that the neural network model from NeMo achieved the highest accuracy (95.6%).

Ashesi Tutorial Hub   **May 2021**
Full Stack Developer
- Used natural language processing to improve course and tutorial materials for Ashesi-taught courses.
- Created a sentiment analysis model from comments given by students to determine whether a material is helpful or not.

ACHIEVEMENTS/AWARDS

Best Computer Science Capstone Project	**Jun 2022**
Applied Research Methods Experience Participant	**May 2021**
Best Statistics Project, Ashesi University	**Dec 2019**
The MasterCard Foundation Scholar Program Scholarship, Ashesi University	**Sept 2018 – Jun 2022**
Second Overall Best Student, Breman Asikuma Senior High School	**Dec 2017**
Dean's List, Ashesi University College	**2018 – 2021**

CO-CURRICULAR ACTIVITIES

Ashesi University**,** Ashesi Student Council   **Feb 2021- Feb 2022**
Academic Committee Co-Chair
- Participated in meetings and decisions affecting the academic well-being of the student body.

Ashesi University, CCAPS   **Sep 2019 – Nov 2021**
Coach
- Assisted the Coaching, Counselling, Academic Advising and Peer support team to improve student welfare.
- Coached 99% of students on academic probation out of it
- Successfully coached over 50 first-year students.

SKILLS
- Experience with Artificial Intelligence, Machine Learning and Natural Language Processing using Pytorch, TensorFlow and NeMo
- Experience with Docker containers for model deployment
- Programming Languages (Python, Java, C++, MySQL, R, JavaScript, and PHP), HTML and CSS
- Data Analysis, Visualisation and Statistical Analysis using Python, Power BI and Tableau