SAMUEL OGHENETEGA OKEI

UTD: SOO200001@UTDALLAS.EDU   +1 (806)-782-9371   WWW.LINKEDIN.COM/IN/SAMUEL-OKEI
TTU: SAMUEL.O.OKEI@TTU.EDU

OBJECTIVE

Seeking internships in embedded system engineering and machine learning to exercise skills in logic design, image and signal processing, wireless technology, and data science.

EXPERIENCE

UTD- COCHLEAR IMPLANT LAB • RESEARCH ASSISTANT   JUNE 2021-PRESENT
- Embedded Systems, Prosthetics and Machine Learning based research.
- Hardware development and advancement of wireless features of the CCi-MOBILE algorithm testing platform

EDYS • INTERN   FEBRUARY 2020 – AUGUST 2020
- Developed application to simulate ecological processes and refactored initial project written in Pascal.
- Used object orientation to improve organization and employed parallel processing practices to improve speed.

RESEARCH PROJECTS

NEUROEVOLUTION OF AUGMENTING TOPOLOGIES
Conducted research on the applicability of evolving neural network architectures in the process of training classifiers. Project was carried out using the Keras framework

ACADEMIC PROJECTS

WI-FI ENVIRONMENT FOR A CUSTOM-MADE ASSISTED HEARING PLATFORM
Established a system for wireless communication with the CCi-MOBILE, a hearing aid/cochlear implant algorithm testing platform to allow testing and analysis of algorithms in naturalistic outdoor sound conditions instead of in-lab closed ideal audio conditions.

64-BIT RISC MICRO-PROCESSOR
Implemented a 64-bit Reduced Instruction Set Micro-processor. The device possesses a register space of 256 bytes and a cache memory space of 1024 byte as well as the standard full range of logical and arithmetic instructions .

MSP430 BASIC INSTRUCTION ASSEMBLER
Designed a two-pass assembler that converts MSP430 assembly program to a binary file. Assembler is made for the basic instruction set of the micro-controller.

GO-NET CLASSIFIER FOR SELF DRIVING

Trained a classifier similar the Stanford GO-NET project that distinguishes between a traversable pathway and a blockage from a rover's point of view. The classifier makes use of a GAN (Generational Adversarial Network) for feature extraction. GAN feature extractor results in a 7% increase in test accuracy on average.

C ELEGANS CLASSIFIER

Created a tool to isolate individual objects in a petri-dish image of c-elegan worms and predict what objects are actually worms. A CNN classifier was trained and resulted in a 98% test accuracy on average.

SPI MOUSE (LANE FOLLOWING ROBOT)

Built a robot that uses signals from a mouse camera to traverse a color-based lane. Signal communication is done using the SPI protocol. Decision making is carried out by single logistic regression unit on the processor. Remote control mode is setup using Bluetooth communication.

EDUCATION

BSC IN COMPUTER ENGINEERING • TEXAS TECH UNIVERSITY   DECEMBER 2020
Minor if Mathematics and Computer Science   **GPA: 3.94**

PHD IN COMPUTER ENGINEERING • UNIVERSITY OF TEXAS AT DALLAS   DECEMBER 2024
                                                                                  GPA: 3.90

SKILLS

Languages : Python, Verilog, C++, C, C#, Java, JavaScript, Matlab, BGscript.
Web Frameworks: Node-Js, React, Flask, Express.
Tools: Keras, Vivado, XILINX ISE, IAR, OpenCV, Scikit Learn, Unity, Simulink.

AWARDS AND CERTIFICATES

- Baker Hugh's Scholarship Recipient.
- Highest Ranking Graduate, Edward E. Whitacre, Jr College of Engineering 2020.

VOLUNTEERING AND EXTRA-CURRICULARS

- NSBE member
- Web development freelancer
- Volunteer at Fight Pandemics/DoingGud