Amoako-Frimpong Samuel Yaw

✉ sam.amoako@gmail.com • in https://www.linkedin.com/in/afsyaw • 🖥 http://www.afsyaw.com

Education

Marquette University, Wisconsin   Sept., 2016 - May, 2018

MS. Electrical and Computer Engineering   **Options** – Mod. Control Theory, Bayesian Signal Processing, Machine Learning

Kwame Nkrumah University of Science and Technology, Kumasi   Oct., 2011 - May, 2016

BSc. Aerospace Engineering   **Options** – Automatic Control, CAD/CAM, Maintenance Eng., Turbomachinery

Skills

Software Development: Python, C, C++, MATLAB, Visual Basic, LabVIEW, Java (incl. Android), Assembly

Electronics: Circuit and PCB design, Embedded Systems (PIC, AVR, ARM)

CAD/CAM: SolidWorks, Solid Edge, ANSYS, AutoCAD, Unigraphics NX, CFD, FEA, Laser Cutting, PCB milling, 3D Printing.

Others: Robotics, OpenCV, ROS, Gazebo, Linux, Unity Game Development, Virtual & Augmented Reality development, Remote sensing, QGIS, Internet of Things, Adobe Creative Suite.

Work & Volunteer Experience

Research and Teaching Assistant   September, 2015 – Present

Computer Vision and Sensing Systems Lab (COVISS)   Marquette University, USA

- Currently working on the development of stochastic search algorithms for improving the dynamic performance of mobile manipulators with MATLAB, ROS, and Python.
- Currently serving as a teaching assistant for the Senior Design Project and Circuit Lab classes.

Research and Teaching Assistant [National Service]   Sept. 2015 – Aug., 2016

Earth Observation Research and Innovation Centre   University of Energy and Natural Resources, Ghana

- Assisted in the setup of a ground station for Direct Broadcast Earth Observation Satellites and handled the system administration of the processing and storage servers for the acquired datasets.
- Wrote scripts in python and VBA, for the formatting of large datasets, automation of data processing and archival tasks; robust to incorrect metadata, network dropouts and power outages.
- Assisted in the setup of software packages (IMAPP, IPOPP, WRF, ROMS) for the earth observation data processing, weather forecasting and ocean modelling.
- Assisted in the field validation and GIS visualization of thermal anomalies detected in VIIRS and MODIS imagery and performed land cover classification using Neural Networks in ENVI.
- Designed an Unmanned Aerial Vehicle (UAV) for remote sensing and imaging.

Software Development Intern   Premium Collateral Management Ltd   July, 2016 – Aug., 2016

- Ported multiple excel sheets used in the management of petroleum stocks into standalone software. The Visual Basic application iteratively approximated the values of ASTM tables, to improve productivity in stock management.

| Embedded Systems Tutor | MISE Summer Camp & Project ISWEST | July, 2012 – Aug., 2016 |

- Taught embedded systems to High School Students; Students built projects like Vision based coin counters, mobile robots, IoT modules and solar trackers using Python, C++ and EV3-G on the Raspberry pi, Arduino and EV3.

| Volunteer Engineer | Agbogbloshie Makerspace Platform | July, 2014 – Aug., 2016 |

- Built a UAV using E-waste for mapping the distribution of activities and airborne pollutants at the Agbogloshie E-Waste Dump site

Projects

Qbay – An Augmented Reality Educational app, 2015

TECH-HAB-001/002 - High Altitude Balloon, 2014/2015

P-[Space] – A Parking lot monitoring system using Computer Vision, 2014

Heavy Lift Quadcopter – Senior Design Project - A Transport and Mapping UAV, 2015

TopBird – A Gamified app for Entrepreneurship education, 2015

IEEE-RCI - A Robot Control Interface for Teaching and a Sonar mapping robot, 2015

Leadership Experience

Vice President	–	Association of Aerospace Engineering Students (AAES) [2013-14] Creativity Group – KNUST [2013-14]
Ass. Projects and Innovation Head	–	Institute of Electrical and Electronic Engineers (IEEE) [2013-15]
Public Relations Officer	–	Association of Aerospace Engineering Students (AAES) [2012-13] Society of Automotive Engineers (SAE-KNUST) [2012-13]
Project Lead	–	Senior design project & High Alt. Balloon, KNUST
Microsoft Student Partner	–	Microsoft-Ghana, KNUST [2013-15]

Awards

- Ghana Institute of Engineers (GhIE) Students Calabash (3rd place), 2015
- Millennium Youth Camp Award, 2013
- International Junior Science Olympiad (Bronze), 2010
- Ghana Engineering Students Association (GESA) Makers Fair 1.0 (1st place), 2014
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) Gamification Hackathon (Finalist), 2015

- OdadeƐ Special Award, 2011
- Behance Medal of Appreciation, 2013
- Accra Science Hack day (2nd), 2015
- DSTV-EUTELSAT Star Award (2nd), 2011
- Ministry of Environment., Science and Tech. (Ghana) Award, 2011
- Ghana Robotics Academy Foundation (GRAF) Medal, 2013

References

Dr. Henry Medeiros	-	Marquette	(henry.medeiros@marquette.edu)
Dr. Amos Kabo-Bah	-	UENR	(amos.kabobah@uenr.edu.gh)
Dr. Anthony Agyei-Agyemang	-	KNUST	(tonyagyemang@yahoo.com)