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Kwabena K. Arthur

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EDUCATION

Master of Science in Mechanical Engineering

2018 - 2020

Bachelor of Science in Mechanical Engineering & Physics

2013 - 2017

Massachusetts Institute of Technology (MIT), Cambridge, MA

Relevant Coursework - Product Design and Development, Global Engineering, Management in Engineering, Large and Complex Systems Design, Fundamentals of Precision Design, Mechanics and Materials I & II, Controls and Dynamics I&II, Design and Manufacturing I & II, Machine Learning, Optics

Thesis: On the Use of Prior Knowledge in Deep Learning

EXPERIENCE

Research Assistant, Research Associate - MIT 3D Optics Group

2017 - 2020

Teaching Assistant (Controls and Dynamics II Class)

2019 - 2020

Department of Mechanical Engineering, MIT, Cambridge, MA

- Designed and built electronic, computational and optical hardware for experimentation
- Designed and implemented Al algorithms in both supervised and unsupervised tasks
- Involved in several publications on the use of machine learning for computation imaging

Treasurer, Mentor 2018 - 2020

MakerWorkshop (Machine Shop), MIT, Cambridge

- Maintained and trained users on the mill
- Managed finances of the machine shop and maintained operating budget

Student Researcher

Mechatronics Lab, Department of Mechanical Engineering, MIT TESS, MIT Kavli Institute for Astrophysics and Space Research

Summer 2016

Summer 2015

- Worked on design improvements of pipe inspection robot; refined design through iteration and testing
- Assembled robot components for a proof-of-concept model
- Worked with the instrumentation team on CCD quality testing
- Wrote scripts for data timing diagram generation

Project Leader, Volunteer

2013-2017

Next Big Thing, Student Group Project, MIT

- Designed a 16ft. tall see-saw and scaffold, complying with MIT EHS and Cambridge City guidelines
- Led the construction and operation of the see-saw; involved in several previous construction projects

Intern

Star Television, Accra 2011-2013

Facilitated the development of content for kid's TV channel and maintained website

SKILLS AND INTERESTS

Software: CAD (Solidworks, etc), Modelling (Blender), CAM (MasterCAM, etc) Programming (Python, MATLAB etc)

Hardware: Prototyping, Machining (Manual, CNC), Electronics (General, Microcontroller, etc)

Areas of Interest: Mechanical Design; Robotics; Systems Design; Electronics; Engineering Consulting;

Manufacturing; Machine Learning; Computational Imaging;