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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;