

KWABENA ARTHUR

Portfolio: www.kwabenaarthur.com | Email: thekjarthur@gmail.com | Phone: +1-617-800-6842

EDUCATION

Massachusetts Institute of Technology (MIT)

B.S. in Mechanical Engineering, Physics

M.Sc. in Mechanical Engineering

GPA: 4.4/5.0

Sept 2013- June 2017, Sept 2018-June 2020

Relevant Coursework

Design and Manufacturing I & II

Mechanics and Materials I & II

Dynamics and Controls I & II

Product Design and Development

Machine Learning

Optics

Engineering Systems Development

Measurement and Instrumentation

SKILLS

Design

CAD (Solidworks, Onshape, Autodesk), CAM (MasterCAM), Electronics (Kicad, EagleCAD)

Fabrication

Injection molding, machining, microcontrollers, soldering, rapid prototyping, 3d-printing

Programming

Python, C++, Matlab; Tensorflow, Sci-kit Learn

SELECTED WORK EXPERIENCE

June 2021 – Present

Labby Inc, Head Data Scientist

- Generated and trained several ML algorithms for milk composition estimation
- Planned and executed on several data collection runs to improve quality
- Researched into new modelling strategies and fluorophore target analytes
- Worked with software and product developers to implement cow RFID logging
- Planned and executed several experiments to validate new prototypes and directions

Aug 2020 – June 2021

MIT Mechanical Engineering Department, Research Associate

Aug 2017 – Sep 2018

- Designed and implemented AI algorithms in both supervised and unsupervised tasks
- Designed and built electronic, robotic, computational and optical hardware
- Developed ML algorithms for fake image detection, scene text recognition
- Developed ML algorithms for computation imaging and incorporating physics
- Involved in several publications, communicated results with sponsors
- Designed and led data collection efforts for various computer vision tasks

Summer 2016

Mechatronics Lab, UROP

- Refined rudder design of pipe inspection robot in Solidworks
- Documented and assembled various iterations of robots including bespoke motor
- Fabricated parts and components using FDM printing, epoxy resin, machining.

Summer 2015

Kavli Institute for Astrophysics and Space Research, UROP

- Worked with instrumentation team on CCD quality testing
- Create electronic footprints libraries in Osmound PCB
- Developed scripts for generation of data timing diagram

PROJECTS

Spring 2017

MIT 2.013 Engineering Systems Design, Mechanical Engineer

- Improved the design of an emergency energy system
- Designed, implemented, and tested new reaction regulation method

Fall 2018

MIT 2.760 Global Engineering, Mechanical Engineer

- Co-led team of 6 in designing a new filter from drip irrigation in developing countries
- Introduced new concept direction allowing for filtration
- Design, fabricated, and tested prototype of filter

ACTIVITIES

Fall 2019

Controls and Dynamics II, Teaching Assistant

Taught a lecture and ran office hours for Controls and Dynamics II class.

Sep 2018 – June 2020

MakerWorkshop, Mentor

Mentored users in student-run machine shop on campus.

