**KWABENA ARTHUR**

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**EDUCATION**

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| **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**

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| **Design**  **Fabrication**  **Programming** | CAD (Solidworks, Onshape, Autodesk), CAM (MasterCAM), Electronics (Kicad, EagleCAD)  Injection molding, machining, microcontrollers, soldering, rapid prototyping, 3d-printing  Python, C++, Matlab; Tensorflow, Sci-kit Learn |

**SELECTED WORK EXPERIENCE**

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| **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 * Implemented new device calibration procedures * Performed CAD and fabrication of various prototypes for new measurements, RFID |
| **Aug 2020 – June 2021** | **MIT Mechanical Engineering Department**, Research Associate   * Designed and implemented AI algorithms in both supervised and unsupervised tasks * Designed and built electronic, robotic, computational and optical hardware * 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**

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| **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**

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| **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. |