# ABASIBIANGAKE JAMES

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## PROFESSIONAL PROFILE

A hardworking and self-motivated graduate of Mechatronics Engineering (Robotics and Software Engineering, BEng). An avid learner who is also highly knowledgeable in the design and manufacturing of robotic devices from scratch. Able to analyse a problem and provide autonomous solutions (Software engineering). Goes the extra mile to achieve the best result. Proficient in robotics and computer vision in object identification and classification. Prolific with using Python Language.

## EDUCATION

**Advanced Diploma, Software Engineering Technology, Centennial College (2022). Grades in progress.**
**Core modules:** Software Analysis and Design, Software Testing and Quality, Mobile App and Development, Programming.

**B.Eng, Mechatronics and Robotic Engineering, University of Leeds (2020). Graduating Grade: (2:1).**
**Core modules:** Artificial Intelligence, Robotics and Machine Intelligence, Embedded Systems, Design and Manufacture and Vibration and Control,

**Foundation Programme in Westerfield College (2017).**
Mechatronics Engineering and Computer Engineering
Cumulative GPA: 4.44 out of 5.00
Foundation Grades: Mathematics – A*, Physics – A, Electrical science – A* and English – B.

## PROJECTS AND WORK EXPERIENCE

**Robotic Management System** **January 2022 – April 2022**

- Designed a software that interacts with its robotic external component to perform several tasks assigned by the health care professional.
- Utilised the Agile Methodology Approach and the System Development Lifecycle to implement the System Requirement Specification and the System Design Architecture.

**Detection of Oxygen in a Microfluidic Device** **September 2019 – May 2020**

- Simulated and analysed a microfluidic device to ensure effective growth of three, 3D bovine embryo tissue in an in-vitro environment.
- Designed each component in the device using SolidWorks and analysed each component individually in COMSOL Multiphysics software.
- Applied mathematics and fluid physics to analyse the oxygen diffusion, concentration as well as the oxygen consumption rate of the 3D embryo tissues in the device.
- Proposed the most suitable micro-sensor and its best position of attachment to the microfluidic device.

**Digital Computing Device** **November 2019 – January 2020**

- Developed a digital computing device that can be used in corporate organisations.
- Designed a circuit that interfaced the Tiva TM4C123 Launchpad with an external LCD and a 4x4 Keypad.
- Designed and assembled hardware parts from start to finish.
- Debugged advanced high level language code.

**Game Technology (Cluedo and Caterpillar Game)** **March 2019 – December 2019**

- Implemented a program on Linux work environment that controls a Turtlebot robot to find and identify a Cluedo character in an environment.
- Used Python programming language to execute the game and Rviz for robot localization and mapping environment in a simulated and real world.
- Developed an electronic video caterpillar game where a caterpillar had to feed to grow and avoid a bouncing predator.
- Used C++ programming language to execute the game on an ARM Mbed K64F board.

- Used Doxygen for creating the documentation for the game code.

**Classy Colonoscopy** **March 2019 – May 2019**

- Designed and built a planar robot arm with a magnet at the end effector with 2 rotary joints.
- Used Kinematics principles to get the coordinates of movement of the robot arm to enable it to move accurately according to the shape of the colon as well as SolidWorks to design the robotic arm.
- LabView application was used to programme and control the speed and functions of each part of the robotic arm.

## TECHNICAL SKILLS AND COMPETENCIES

- **Programming** – Python, C++, HTML 5, C, MATLAB, LabVIEW, Prover9, C#, Java and Debugging.
- **Data Analytics** – COMSOL Multiphysics, Microsoft Excel, Machine learning, SQL, PL/SQL.
- **Electrical Testing** – Circuit Analysis/Design, System design, Embedded system, PLC, Soldering, Rviz for virtual environment testing, Electronics.
- **Mechanical Design and Manufacture** - Solid mechanics, SolidWorks.
- **Other competencies**: MinGW, Mbed, Microsoft Office Suite.

## OTHER WORK EXPERIENCE AND VOLUNTARY WORK

**Administrative Officer, Power Connections, Leeds.** **November 2017 - Current**

- Review and evaluate scheduled programmes.
- Prepare reports and analysis of concluded programmes.
- Conduct administrative duties.
- Seek endorsements and communicate with advisors on grant proposals.
- Support in resource training.
- Quarterly evaluates activity trends and recommends best options to management.

**Executive Board Member, NSS, UL.** **September 2018 – May 2019**

- Coordinate all operations in the organisation.
- Come up with suggestions to enhance the event success.
- Source and negotiate with business vendors and suppliers.
- Planned and made logistics available for events.

**Wellbeing Representative, University of Leeds, Leeds.** **April 2018 – April 2019**

- Worked in collaboration with the Student Support Office to encourage wellbeing support among students.
- Refer urgent student needs to relevant departments for action.
- Maintain regular communications with students for support.
- Avail students' access to emergency contacts.
- Participated in organising induction events for new students.
- Collated feedback from students on ways to encourage wellbeing campaigns within the campus.

## SOFT SKILLS

Communication, Team working, Problem Solving, Attention to details, Planning and organisational skills, Leadership, Coaching & Mentoring, Critical thinking, Time management.

## MEMBERSHIPS AND CERTIFICATION

- Member of the Institution of Mechanical Engineers (IMechE) society.
- Member of Association For Black and Minority Ethnic Engineers in UK (AFBE-UK).
- Member of the Institute of Electrical and Electronics Engineers (IEEE-UK).
- International Foundation Programme (IFP) Certification.
- HackerRank Python Certification.
- Earned a certified badge in Python.
- Inclusive Leadership Certification in progress.

## INTERESTS AND HOBBIES

Travelling, Reading, Running, Photography.

## REFERENCES

On request.