# LAWAL H. IBRAHIM

Software Engineer

Individual with bags of energy, determination and passion for developing and managing impactful and life-changing Software Systems.

Having successfully contributed and achieved in delivering various Vehicle Programs by offering skill and expertise in engineering, as wells as team building and management in the Automotive Industry, I now embark on this journey to transition into the Tech Industry.

Above all, Lawal is very enthusiastic about doing good, helping and empowering people, bringing positivity in people's lives.

## Experience

*RLE Futuremotiv – System Integration & Controls Development Engineer*
November 2020 – Present
**Function**: Vehicle Networks, Braking and Air Suspension Systems Engineer
**Achievements**: Network Architect for the Volta Trucks Electric Vehicle, helped in designing vehicle networks, delivering the Mule and Development vehicles. I also wrote the Mule Vehicle Display Software (MBD) that shows important information about vehicle speeds, charging, torque requests etc.

*Tata Technologies Europe – Electronic & Software Systems Engineer*
September 2018 – November 2020
**Function**: Controls (Model Based Design), Tools & Process Development, Automation and Management. Test Development & Validation
**Achievements**: I have received awards and compliments by the Caterpillar Core Engines Control team for bringing advancements in automating tests, BoM generation and developing a team's performance tracker using Python. Managed the offshore team in India to ensure regression test scripts are developed and run for every software release to ensure functional safety requirements are met.

*Maxon Motor UK – Technical Support Engineer*
August – November 2016
**Function**: Support to customers on DC/AC motors, controllers as well as sensors. Testing, repairs, and component return management

*RDM Group – Design Engineer*
March – June 2016
**Function**: Laser sensor calibration, interfacing for data acquisition. Trajectory and path planning for autonomous vehicles

*Electronics Laboratory – Product Development & Support Engineer*
September 2014 – September 2015
**Function**: Developing and maintaining Embedded Systems projects, teaching materials. Provision of Lab support at Coventry University
**Achievements**: GE Energy Connections Prize – Best showcased project


**Personal Info**

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**Skills and Competences**

React JS
HTML, CSS
JavaScript
TypeScript
Node JS
Jest
TDD
Redux
Express – REST API
Git
Python
C#
Android Development (Java)
Agile

Problem Solving
Analytical, Creative
Proactive
Time Management
Leadership
Communication
Attention to detail

**Education**

*Udacity – Full Stack Web Developer Nanodegree Program | March – July 2021*

**Casting Agency** – Creating and managing movies and assigning artists. Three user access with auth to manage CRUD operations. Python, Flask, SQLAlchemy & Flask-Cors.

**Deploy Flask API to Kubernetes** – Simple API deployed that validates username and password as json arguments and returns JWT based on a custom secret, which then un-encrypted contents. Deployment was achieved using Docker, AWS EKS, CodePipeline and CodeBuild.

*University College London (UCL) – MSc Robotics and Computation | September 2018 – September 2019*
*Grade:* ***Distinction***
*Thesis:* Field-deployable Fourier Ptychographic Microscope for High Throughput Malaria Diagnosis. Used Vanilla JavaScript, SocketIo, GPIO and Express server to control the Microscope remotely. Utilised Docker and ResinIo to package the application in a Raspberry PI.

*Coventry University – BEng (Hons) Electrical and Electronics Engineering | September 2012 – September 2016*
*Grade:* ***First Class***
*Thesis:* Home Automation and Smart Home Control for Intelligent Living

**Relevant Projects**

*Autonomous Vehicle Localisation and Mapping*
**Company:** RDM Group (Created a new subsidiary called "Aurrigo Ltd" that produces the Autonomous vehicles)
**Development Aids:** Programming Language (C++) & IDE (Eclipse)
**Brief:** My task was to interface with a Hokuyo Laser Scanner, acquire data and build a map of the environment. I used the K nearest neighbour search algorithm to calculate distances from the query point to all other points, sort by distance and return nearest item. By establishing nearest point to every other, one can build a map.

*System Testing – Verification and Validation (Machine Systems Wheeled Excavator)*
**Company:** Caterpillar inc. (Consulting on behalf of Tata Technologies)
**Development Aids:** NI VeriStand, Automation Desk and Python
**Brief:** As a System Test Engineer, I was involved in the full software development process. My responsibility was to capture requirements; write test plans; automate tests using Python; perform manual tests, analyse, and produce technical documentation. I was also managing the offshore team in India to ensure regression test scripts are developed and run for every software release to ensure functional safety requirements are met.

**Hobbies and Interests**

**Entrepreneurship** – I am very keen to build businesses, in fact I have already had some failed attempts and still currently remotely running and experimenting with small-scale businesses.

**Football** – In another world, I would be a Ronaldo-Messi Hybrid. On a more serious note, I love playing, watching and analysis football games. I am also looking into what I can with Tech in this space