# FRANDEL WANJAWA


**Home** : Nairobi, Kenya

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**Gender:** Male **Date of birth:** 27/09/2000 **Nationality:** Kenyan


## ABOUT ME

Final Year Engineering Student, Programmer, Passionate about transforming the world and building foolproof software and hardware systems.

## WORK EXPERIENCE

[ 15/01/2024 – Current ]

### Communication Subsystem Lead

***Kenya Space Agency- Tafiti project***

**City:** Nairobi | **Country:** Kenya

- Developed an implementation framework for the 3U communication subsystem nanosatellite.
- Co-developed codeblocks for the communication subsytem hardware.
- Managed the GitHub organisation of the communication subsystem.
- Co-developed a user interface for the Ground Station using React, Django and Vite.
- Streamlined workflow to enhance performance with other subsystems involved in the building of the nanosatellite.

[ 03/2023 – 05/2023 ]

### Engineering intern

***Egypro East Africa Limited- Kenya***

**City:** Nairobi | **Country:** Kenya

- Maintained power systems in over 50 Safaricom booster sites in Kiambu region of Kenya.
- Ensured seamless transfer of information between the command centre and remote site.
- Performed electrical troubleshooting on power systems and generators.
- Ensured efficient use of organisational resources.

[ 01/2023 – 03/2023 ]

### Engineering Intern

***GEARBOX KENYA***

**City:** Nairobi

- Developed engineering solutions to address challenges affecting the continent.
- Co-designed hardware and firmware that were then fabricated on PCB.
- Developed User interface for data visualisation of data from sensors.

[ 01/2022 – 04/2022 ]

### Engineering Intern

***UNTAPPED GLOBAL/ FEDHA ELECTRICS***

**City:** Nairobi

- Developed engineering solutions to address challenges affecting the continent.
- Performed tests on engineering solutions developed by other engineers.
- Co-developed a geofensed speed limiter.
- Developed an implementation framework needed to develop line following and object avoidance robots.

[ 07/2019 – 08/2019 ] **Cencus Enumerator**

***KENYA NATIONAL BUREAU OF STATISTICS***

**City:** Teso North

- Collected data from respondents and uploaded the data to KNBS.

## EDUCATION AND TRAINING

[ 09/2019 – Current ] **BSc. Electronics and Computer Engineering**

***Jomo Kenyatta University of Agriculture And Technology*** https://www.jkuat.ac.ke/

**City:** Juja | **Country:** Kenya |

[ 12/02/2015 – 11/2018 ] **Kenya Certificate of Secondary Education [A-(minus)]**

***Friends School Kamusinga[English, Swahili, Math, Chemistry, Biology, Physics, Geography, CRE]***

**City:** Kimilili | **Country:** Kenya |

[ 11/2014 ] **Kenya Certificate of Primary Education [400 marks]**

***King David Preparatory - Kolanya[English, Swahili, Math, Science, Social Studies, CRE]***

**City:** Kolanya | **Country:** Kenya |

## VOLUNTEERING

[ 01/2022 – 12/2022 ] **CAREGIVER- CANCER FRIENDS OF HOPE** NAIROBI

- Provided physical, emotional, financial and spiritual help to cancer patients with majority of them domiciled in slum areas in kenya.

## NETWORKS AND MEMBERSHIPS

[ 09/2019 – Current ] **SOCIETY OF ENGINEERING STUDENTS- JKUAT** Juja, Kenya.

## PROJECTS

[ 01/2024 – Current ] **3U- NANOSATELLITE FOR KENYA SPACE AGENCY**

Co-developed a foolproof bench model and engineering model of the Communication subsystem for a 3U nanosatellite for Kenya Space Agency under the Tafiti project employing the use of STM32, Raspberry Pi, Arduino, and esp32 boards. Lora modules as transceivers, Kicad as the PCB design tool and VS code, GitHub, ArduinoIDE for development of the firmware. Additionally, built a robust user interface to visualise both beacon and payload data in realtime using React, Django and Tailwind.

[ 01/2022 – 04/2022 ] **SMART GEOFENSED SPEED LIMITER**

Developed a consumer friendly speed governor that is location based using KenHA and KURRA data to enhance road safety in Kenyan roads. It is founded on PHP, MQTT, MySQL and Arduino.

[ 08/2023 – 11/2023 ] **SMART BABY CRIB**

Developed a baby friendly crib to monitor the at infantstage to mitigate challenges of infant theft and deaths due to harsh environment. This Arduino based project sought to reduce infant mortality by a considerable percentage and included a

display and a mesaging system to inform the parent or guardian in case of an intruder.

[ 07/2023 – 08/2023 ] **ROBOTICS DOJO**

Competitively selected into the JKUAT-JICA robotics programme. Co-developed an autonoumous object identifying and picker robot that served as a model for an industrial robot. Built on a raspberry Pi, involving object detection and an optimised mobile platform.

[ 2022 ] **HOME AUTOMATION**

Developed an arduino based home automation system to control the functionality of the various appliances over the phone using various sensors and actuators.

## PROGRAMMING LANGUAGES

**PYTHON, C, C++, ARDUINO, MATLAB, JAVA, PASCAL, HTML, CSS, JAVASCRIPT, PHP, REACT**

DJANGO, SELENIUM, DATA STRUCTURES AND ALGORITHM, SIGNAL PROCESSING.

**GITHUB, VSCODE, PYCHARM, DOCKER**