KELVIN GATURUHU CHUI

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ABOUT ME

I am a mechanical engineering technologist and a seasoned programmer well-versed in web and mobile technologies, IoT, logic-based programming, mechatronics, and robotics.
My expertise includes creative thinking, problem-solving, logical thinking, and system design.
I am eager to contribute to team success through hard work, attention to detail, and good communication skills over and above my training and skills.

WORK EXPERIENCE

Inceptor Institute of Technology   August 2022 - present

Software Development Instructor

- My role is to teach, instruct and guide students of different ages and background on the steps they need to take to become competent software developers.
- My first task was to come up with a curriculum and work plan on how to go about teaching the various languages to the students.
- Languages taught include HTML, CSS, Bootstrap, php, MySQL, JavaScript, Python and Django and Flutter under different modules.
- Modules taught are:-
  -Web design (HTML, CSS, BOOTSTRAP)
  -Web and Software (front-end through web design and backend through Php and mysql)
  -Software and Mobile App Development Intermediate (Web and Software plus Dart with Flutter for mobile)
  -Software and Mobile App Development Advanced (Web and Software, Dart with Flutter and either Javascript or Python)

Nimden Enterprises   October 2021 - January 2022

Industrial Attachment

- I had the opportunity to join Nimden Enterprises for my three-month industrial attachment.
- Nimden Enterprises is a manufacturing venture that deals with sheet metal forming processes.
- I was tasked as a machine operator trainee and had the opportunity to learn the operation and maintenance of the various machines.
- These machines include a sheet metal shearing cutter, a hydraulic press brake machine for bending, a roller machine, an expanded wire-making machine, a punching machine, and a roller shutter making machine.

EDUCATION, TRAINING AND CERTIFICATIONS

Kiambu high school
2015
— Kenya certificate of Secondary Education (K.C.S.E) B+

EMobilis Mobile Technology Training Institute
2016
— Certificate in Mobile Software Development and Entrepreneurship (MIT)

Gearbox kenya
2019 - 2021
— Certificate in Workshop Technologies, Digital Fabrication and Human Centered Design

Power Learn project(PLP)
2022
— Software Development Program

The Technical University of Kenya
2016 - 2022
— Bachelor of Technology Mechanical Engineering Technology
SECOND CLASS HONOURS (UPPER DIVISION)

TECHNOLOGIES AND PROGRAMMING LANGUAGES

GIT | HTML | CSS | C and C++ | Python | django | MySQL

JavaScript | Node Js | PHP | React Native | Three Js | Mongo DB | FLUTTER

Raspberry Pi | Arduino | PlatformIO | solidworks | Fusion 360 | EasyEDA

PERSONAL PROJECTS AND ACCOMPLISHMENTS

Made a two way electromechanical switch for physical and wifi switching

I wired a relay controlled by an Espressif microcontroller to a physical switch. The wiring was done in a two-way configuration enabling switching by either the relay or physical light switch

Made an automated CNC embroidery module for our final year project

Through intensive team effort by my project partner and I, we were able to design and make an embroidery module that can be attached to old sewing machines to enable embroidery operations to be performed when needed. The module is detachable to allow the sewing machine to perform normal straight stitch sewing operations.

Made a robotic gripper that mimics a hand

Using a camera feed, object recognition, and object tracking machine learning model, I was able to track my hand and get the relative position data of my index and thumb fingers and use the data to control the angle of two servo motors and hence simulate a robotic gripper.

Made a learning management system with no backend using session storage

This was following one of the Web Development assignments under the Power Learn Project. The task was to design the front end of a learning management system where a student or instructor would log in and view their progress.I wrote a code that would generate dummy data and store it temporarily using session storage until the user logged out.

Made an Ecommerce Web Application using Python django

For my final project under the Power Learn Project I opted to create a full stack Ecommerce website using django. The website features add to cart functionality, register and log in users with their cart data stored in a database, order placement and payment using Mpesa via daraja api.

Made a React Native App to communicate with programmed espressif devices

Tired of viewing data logs of my Espressif devices on the terminal, I developed a simple app that would connect to any device on the same network. I used UDP broadcast to send a message to all devices on the network and only specific devices would respond, this would provide the devices IP address to initiate a websocket connection and get sensor data. This project is still a work in progress now being developed with Flutter.