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DESIGN OF AN INTELLIGENT CRYPTO CURRENCY MINING FARM (CMF) FOR VEHICLE USING ML

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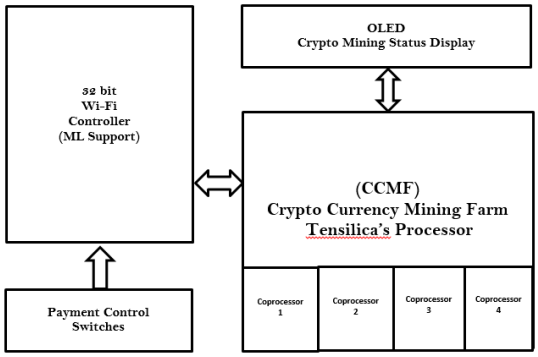
Abstract: Due to the need for non-renewable resources like gasoline and diesel, electronic toll collection, and vehicle parking costs, travel and transportation costs are at an all-time high on a global scale.
In order to reduce the costs of electronic toll collection charges, vehicle parking expenses, and expenses like electric vehicle charging station bills, the automotive industry has proposed new ideas like electric vehicles, which will replace the use of current high-cost non-renewable resources like gasoline and diesel. Additionally, the automotive industry has proposed a new idea to reduce the costs of vehicle parking.

Any low-voltage client may install the plug-and-play CCMF gadget to turn electrical energy into digital money. The CMF will have internet connectivity inside the car, access the block chain, begin mining for cryptocurrency, earn cryptocurrency, and transfer cryptocurrency to digital wallets. This will be utilised to cover all costs in the subsequent stage.

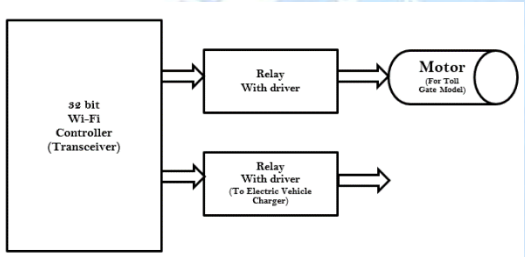
The two modules in the suggested idea are 1. CCMF in the vehicle, and 2. toll collecting and electric charging. CMF is run on a 32-bit Tensilica CPU, and internet access is provided through a Wi-Fi module that is connected. On the ETC side, a Wi-Fi module with two relays is available for EV charging and toll gate access. As soon as the switch for pay mode is struck, money from the vehicle's digital wallet will be immediately sent to the ETC as a toll charge and something will be noticed in our digital wallet. The same procedure will be used for all fees, including parking and charging.

BLOCK DIAGRAM

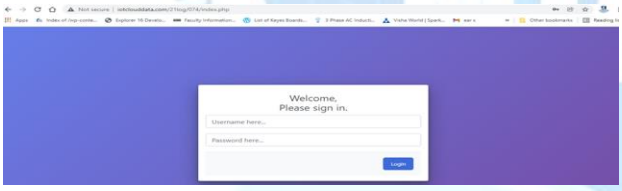
VEHICLE WITH CRYPTOCURRENCY MINING FARM (CCMF)



Electronic Toll Collection (ETC) Side:



ETC Side System



HARDWARE REQUIREMENTS:

1. Crypto Currency Mining Farm (CCMF)
2. OLED Display
3. Wi-Fi controller
4. Relay
5. DC Motor for toll gate model

SOFTWARE Requirements:

1. Embedded C
2. IDE
3. php

BIT WIFI CONTROLLER:

32-Bit and 64-Bit are terms used in the computer industry to describe the different types of cpus, operating systems, drivers, software, etc. that use a certain architecture. Software and hardware for bits are often referred to as x86 or x86-32.

Our 32-bit MCUs provide the functionality and flexibility to support you in developing cutting-edge solutions for the newest applications, from entry-level to high-performance alternatives. To locate the product family that best fits your design needs, use the links below. Our 32-bit microprocessor are a perfect addition to our MCU line if your design requires more power than our MCUs can provide or if you wish to utilise the Linux® operating system.

The term "32-bit microcontroller" denotes a device that can perform arithmetic operations on 32-bit values. The 32-bit microcontroller executes a function in less instruction cycles than an 8-bit microcontroller because of its broader data bus.

An example of a 32-bit CPU architecture is one that can send 32 bits of data per clock cycle. Technically speaking, this implies that processors can operate on 32-bit binary numbers (decimal number up to 4,294,967,295). Any greater, and the computer would have to divide the data into more manageable chunks.

OLED:

Winstar small OLED display module are perfect for a number of devices that require electronic display panel. These applications include wearable devices, E-cigarette, POS system, white goods, home applications, industrial instrument, POS system, automation, audio/visual display systems, medical devices, personal care appliances, household goods, automobile displays , Dynamic information displays

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SSD1306 OLED Driver & its interfaces

The SSD1306 is a potent single-chip CMOS OLED driver controller that powers the module. It has a variety of methods to interface with the microcontroller, including I2C and SPI.

SPI often moves more quickly than I2C but uses more I/O pins. When compared to I2C, which only needs two pins and may be shared, Pins and speed are traded off in this situation. So, the decision is ultimately up to you.

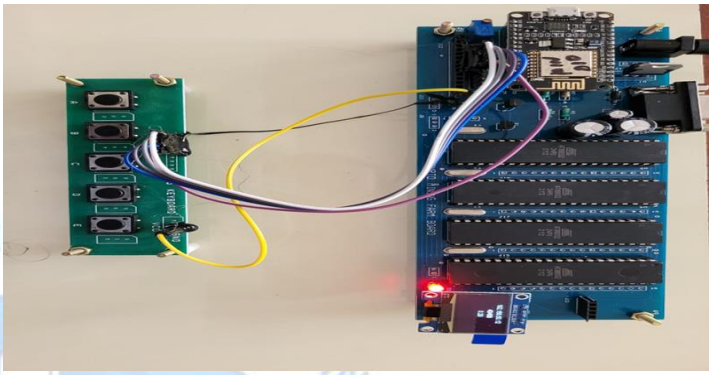
Because of the flexibility of the SSD1306, the module is available in a variety of sizes and hues, including 128x64 and 128x32, as well as with white, blue, and dual-color OLEDs. The good thing is that these displays can all be switched out.

Power Supply Requirement

An OLED display works without a backlight because it makes its own light. This is why the display has such high contrast, extremely wide viewing angle and can display deep black levels. Absence of backlight significantly reduces the power required to run the OLED. On average the display uses about 20mA current, although it depends on how much of the display is lit.

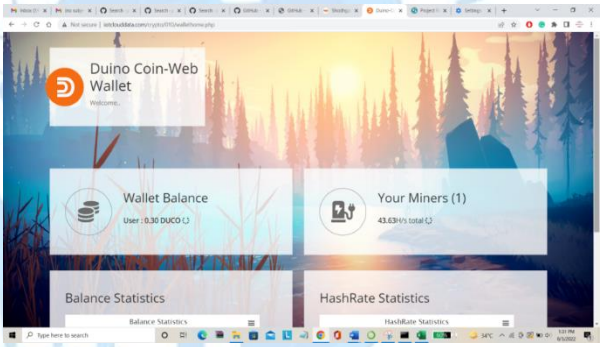
RESULT AND DISCUSSIONS

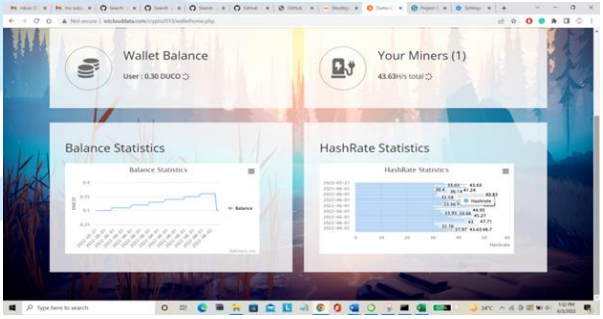
VEHCILE MINING UNIT



This Part of the hardware refers to the crypto coin mining Setup on Vehicle which operates On Internet.

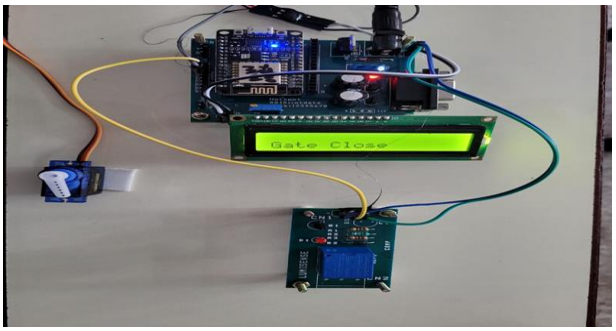
MINING WALLET HOME PAGE





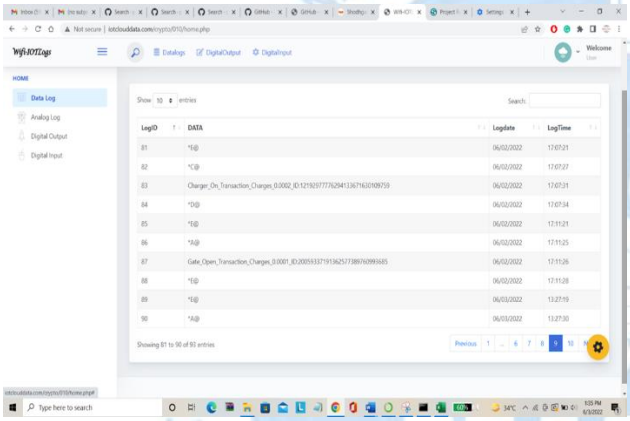
This website having our balance information About crypto coins mined.

TOLLGATE HARDWARE PART



This part of Hardware defies the Toll Gate part of the system. Which is used to open and close the Toll gate System and Relay Used for Charging purpose.

PAYMENT HISTORY PAGE



This Web app contains our information about the Payment details which we spend on for Toll gate Amount and Charging Station Purpose.

CONCLUSIONS AND FUTURE WORK:

In future work, we plan to address some of the limitations described earlier and focus on detecting crypto-mining scripts that employ evasion techniques, particularly obfuscation. The detection and analysis of obfuscated JavaScript is an open research problem and can be approached from a static or dynamic perspective. We also plan to adapt MANiC to extract features from the website in addition to the crypto-mining scripts. Initially, the 58 features described in will be taken into consideration

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