# Faiq Muhammad Arif

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## **Projects**

### Trans Jogja Modern Transit Map (2016)

Voluntarily created the first Metro-style modern transit map for Trans Jogja bus rapid transit system as a design project that serves as an inspiration for the current transit map used by Yogyakarta's Department of Transportation

### LunarClock (2020)

LunarClock is an ephemeris program that can calculate the current phase and position of the moon. The backend is written using Python, while the interface is created using Django and Tkinter. Django is used as a framework for a web-based interface. Tkinter is used to create a lightweight display interface as this program is meant to be run on a Raspberry Pi Zero W.

### VENDY-3000 (2020)

VENDY-3000 is a command-line program that simulates a vending machine system. It is able to manage, record, and display sales data. It is also able to calculate change given to the customer based on the denomination of money it is currently storing, which is missing in many current vending machine systems. This program was written using pure Python.

### FONO (2021)

FONO is a flood detection device that uses an ESP32 microcontroller and ultrasonic sensor. The backend is written using C and the frontend utilize an internally-hosted light web interface programmed using HTML/CSS and Javascript. It also uses Telegram API to warn users of potential floods through instant chat messaging service.

#### **MADS UAV (2021)**

MADS is an acronym for Modular Autonomous Delivery System. This system uses an unmanned aerial vehicle (UAV) that can land anywhere using its vertical take-off and landing capability. I was responsible in designing the aerodynamics and structure of the UAV. I was also involved in programming and designing the payload dropping device using Arduino.