

# Mukul Aryal

A Computer Science student as well as a developer with a passion for problem-solving and coding.

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## EXPERIENCE

### Techore Solutions, Remote – Backend Developer

July 2023 - October 2023

- Built a robust and reliable backend using ExpressJS.
- Designed and implemented the entire database in PostgreSQL.
- Set up CI/CD pipeline using GitHub Actions.
- Wrote clear and excellent documentation.
- Gained experience using collaborative tools like Jira, Confluence, and Slack.

### KU HackFest 2023, Kathmandu University – Technical Team

October 2023

- Maintained and updated pre-existing Django backend.
- Collaborated with other team members.
- Assisted attendees with technical queries.
- Wrote and tested scripts for random assignment of judges.

### NepaliTelecom.com, Kathmandu – Content Creator

July 2022 - August 2022

- Studied and researched about the Nepali tech market.
- Wrote easy-to-read and informative blog posts.
- Managed the SEO of blog posts.
- Filmed, narrated, and edited video reviews of smartphones.
- [www.nepalitelecom.com/author/mukul-aryal](http://www.nepalitelecom.com/author/mukul-aryal)

## EDUCATION

### Kathmandu University, Dhulikhel – BSc. Computer Science

February 2022 - Present

### Uniglobe SS/College, Kamaladi – +2

2018 - 2022

### Bagmati Boarding School – SEE

2005 - 2018

## SKILLS

Full Stack Web Development  
Mobile Application Development  
Scripting and Automation  
Data Visualization  
Machine Learning

## SOFT SKILLS

Video Editing  
Public Speaking  
Clear Documentation

## AWARDS AND CERTIFICATES

### Postman API Fundamentals

#### Student Expert

February 2024

Credential ID:

65d5c7c3c8689d5d1ff61670

### Supervised Machine Learning:

#### Regression & Classification

February 2024

Credential ID: 84X63CP9WPF4

### Winner - Aarohan 1.0

#### Hackathon

September 2019

Everest Engineering College

### Winner - Mobile Application

#### Development Hackathon

February 2019

Uniglobe SS/College

## PROJECTS

### Superveyes – Machine Learning Driven Parking Solution

A parking system that utilizes different deep learning models to automatically identify the type of vehicle and extract its number plate information.

- Collected and wrangled images of Nepali license plates.
- Utilized Ultralytics' YOLO tool to train a Number Plate Recognition model.
- Created a computer vision pipeline to pre-process images to pass through an OCR model.

### TaskSphere – Project Collaboration Platform

An online service that allows organizations to split up into different projects as well as teams to better allocate and track tasks.

- Created the entire backend using Django, Jinja2, and DRF.
- Visualized, normalized, and implemented the entire SQL database.
- Created the admin dashboard using Jinja2 and TailwindCSS.
- Implemented both server-side as well as API authentication.
- [github.com/mukulboro/collaboration-project-backend](https://github.com/mukulboro/collaboration-project-backend)

### SadakVision – Road Condition Mapper

A mobile application that allows users to capture images of road deformities (like potholes and cracks) which is passed through a deep learning model to locate them. The image is put onto a map along with a safety rating.

- Utilized Ultralytics' YOLO tool to train an object detection model.
- Created the complete application using the Flutter framework.
- Implemented authentication using Auth0.
- Made use of Google Maps to plot the relevant coordinates.
- [github.com/mukulboro/road-condition-detection-mobile-app](https://github.com/mukulboro/road-condition-detection-mobile-app)

### 8-Bit Assembler – Convert instructions to RAM image

An assembler that takes in instructions set to generate RAM image to be used in Logisim where we designed and simulated an 8-bit CPU.

- Wrote a rudimentary parser in Python.
- Completely external dependency-free.
- Takes in a config file and a custom assembly instruction set.
- Converts assembly into machine code.
- [github.com/mukulboro/8bit-assembler](https://github.com/mukulboro/8bit-assembler)

### Google Image Scraper – Scrape Images in bulk

A simple CLI tool that helps to download images from Google in bulk.

- Can download base64 as well as HTTP images.

## TOOLS AND FRAMEWORKS

Django

ExpressJS

Flask

FastAPI

Flutter

React Native

ReactJS/NextJS

TailwindCSS

PyTorch

Ultralytics

Pandas

Numpy

Matplotlib

Selenium

MongoDB

PostgreSQL

SQLite

Tkinter

QT

Linux

VS Code

- Easy to use and well-documented CLI.
- Used the Selenium package to simulate a headless browser.
- [github.com/mukulboro/google-image-scraper](https://github.com/mukulboro/google-image-scraper)

## **Yash Journeys – Portfolio Website for travel agency**

*A single-page website for a travel agency.*

- Designed and coded a beautiful and responsive UI.
- Made using NextJS.
- All CSS is written manually without any frameworks.
- [Nhsa7yjmiy9.vercel.app](https://Nhsa7yjmiy9.vercel.app)

## **Karmanya – Portfolio Website for NGOs**

*A single-page website for an NGO agency.*

- Designed and coded a beautiful and responsive UI.
- Made using NextJS.
- Used MaterialUI for UI components.
- [final-karmanya.vercel.app](https://final-karmanya.vercel.app)

PyCharm

Jupyter Notebook

Jira

Slack

Confluence

Git

GitHub

Adobe Photoshop

Abode Premiere Pro

Office Suite

## **LANGUAGES**

Nepali, English, Hindi