Rahul Ravi Mahatha

ABOUT

I am one of the pioneer batch student of the AI program run by Kathmandu University. I am the founder president of the Kathmandu University Artificial Intelligence Club. I have completed an AI Microdegree fellowship program at Fusemachines. I have worked in several IoT and AI projects.

EXPERIENCE

CIRCLE LEADER 2016

11th National SQC Convention

• Problem solving tools (Brainstorming, 80-20 rule through Pareto analysis, Ishikawa diagram, Why-Why analysis) Finding solutions and its Implementation, survey and many more.

DELIGATE 2017

International Model United Nation

• Learned Negotiation skills. Group work and communication skills.

PARTICIPANT 2018

AT- Hackathon Thapathali Campus

 Cooperated with differently-abled people to solve their difficulties, Designed a prototype of low-cost color detector for blind.

FOUNDER PRESIDENT

Sept. 2022

KUAIC Panchkhal Campus

• Established a student AI club in KU Panchkhal Campus. Served as the President of founding committee.

${f AI\ MICRODEGREE}^{\scriptscriptstyle{\mathsf{TM}}}$

2023

Fusemachines AI Fellowship

• Learned fundamental of Machine Learning and Deep Learning. Specialized on Computer Vision and NLP.

ORGANIZER 2023

AI MEET AI CRUSADE

• Fund raising and finance handling. Event Management skills.

WINNER 2023

AI4GROWTH Coding Challenge

• Implemented YOLOv8 object detection. FastAPI Flutter for Saarang's business app.

RUNNER-UP 2024

YANTRA 9.0 Businesses Cup Softbots

NATIONAL AI CONFERENCE

• Extraction of information from the physical bills by the use of vision model. Review and edit the scanned details with ease. The app calculates the total price automatically for accuracy.

RUNNER-UP

Nov. 2024

 $For ewarn\ Disaster\ Hackathon$

First Ever All Over Nepal Hackathon

• Developed a web application for wildfire management.

AI PROJECTS

HISTORICAL LANDMARK DETECTION

2023

AI4GROWTH Coding Challenge

- * Implemented YOLOv8 object detection.
- * Deployed model's FastAPI endpoint on Render.
- * Created a Flutter app for object detection to scan temples using the camera.
- * The app automatically redirects to a webpage with an audio story in different languages of the detected temple.

Khop-BOT: AN RAG-BASED CHATBOT

2024

NCIT Hackfest

- * Leveraged the power of the LLaMA 7b model for question answering based on information in PDF documents.
- * Containerized Chainlit chatbot and the model into a Docker image.
- * Deployed Docker image on Render.
- * Designed KhopBot to provide comprehensive and accurate information about immunizations, vaccines, and related topics.

TWITTER SENTIENT ANALYSIS

2023

Fusemachine NLP Capstone Project

- * LTrained CNN model to predict tweet sentiment.
- * Streamlit powers the interface, displaying both the sentiment and confidence level via a slider.

SATELLITE IMAGERY ENHANCEMENT USING SRGAN

Fusemachine Computer Vision Capstone Project

- * Used SRGAN architecture to train the model.
- * The project aimed to enhance the visual quality and details of low resolution satellite imagery by training a Super Resolution with GAN model on satellite images.

2D IMAGES TO 3D MODEL RECONSTRUCTION

2024

- * Preserve and promote the cultural heritage of Nepal through digitization.
- * Research on 3D reconstruction techniques.

ACTIVE PROJECTS

THE AI-POWERED TUTA ABSOLUTA DETECTION AND ALERT SYSTEM

2025

NAST Young Scientist Grant

- * Selected project name 'The AI-powered Tuta Absoluta Detection and Alert System'.
- * The project aims to provide early warning to farmers against the devastating tomato leaf miner moth, Tuta Absoluta, using object detection and IOT technology by sending SMS alerts to their mobile phones.

EDUCATION

B.Tech AI | KU Recent GPA: 3.65

Panchkhal, Nepal Sept. 2021 - Sept. 2025

AI MICRODIGREE Program | FUSEMACHINES

Kathmandu, Nepal

Machine Learning and Deep Learning

Dec. 2022 - Dec. 2023

TECHNICAL SKILLS

Programing in C++ and Python, Machine Learning and Deep learning, Good understanding of Computer, Vision, IoT and Robotics, Basic Understanding of NLP, Numpy, Pandas, Seaborn, Scikit-Learn OpenCV, Gensim, TensorFlow, Firebase, FastAPI, Chainlit, Streamlit, YOLO, Docker and Render

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2023