

Prashant Raj Bista

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Education

IOE, Thapathali Campus

April 2021 - Present

Bachelors in Electronics, Communication and Information Engineering

Experience

AI Fellowship 2024

Apr 2024 - Oct 2024

FuseMachines Nepal

- Studied Under the Guidance of Instructors from the FuseMachines
- Completed a project as a part of Fellowship

Publications

Mechanical Automation with Vision: A Design for Rubik's Cube Solver

[Paper](#) [🔗](#)

- Developed a low-cost mechanical system that can solve the 3x3x3 Rubik's Cube
- Used Yolo for Cube Face Detection and Mechanical system to solve the cube.

Projects

Backend Development for Thapathali Campus | *Django, DRF, PostgreSQL, Gunicorn*

[Website](#) [🔗](#)

- Developed the database schema and API for the overall Campus
- Deployed the backend web application on the onsite server

Backend Development for ChaiyoPaiyo | *Django, DRF, PostgreSQL*

[Website](#) [🔗](#)

- Built a system for service directory-based Web Application
- Developed SSR for the web application and API For the Mobile Application
- Deployed the web application on Cpanel.

Chatbot For Appointment Booking | *Langchain, Streamlit, GmailToolkit, FAISS*

[Github](#) [🔗](#)

- Built an LLM-based chatbot for booking appointments in a conversational style
- The bot takes in a PDF and chats accordingly.

YOLO-based Night Jasmine Counter | *Ultralytics, Streamlit, OpenCV*

[Github](#) [🔗](#)

- Build a system that can count the number of Night Jasmine lying on the ground

Math Word Problem Solver | *BART, Chromadb, Streamlit*

- Takes in a Linear Math Word Problem of one and two variables and solves it.
- Recommend a Similar type of Word Problem to the user.

Autonomous Rubik's Cube Solver | *Ultralytics, Arduino, Fusion360*

[Youtube](#) [🔗](#)

- A mechanical system that can solve a 3x3x3 Rubik's cube.
- YOLOv8 was used to detect the cube.

Manage Hackathon | *Django, DRF, SQLite*

[Github](#) [🔗](#)

- A MLH Hackathon Project for theme "Hack for Hackers"

Technical Skills

Languages: Python, C++, C

Developer Tools: Git, Bash, Postman, SSH, Node.js

Libraries: Pandas, SQLAlchemy,

Frameworks: Django, Django Rest Framework, Flask, Express.js, Pytorch, Langchain, Streamlit

Databases: PostgreSQL

Platform: Linux, Windows

Certifications

AI Fellowship 2024

[Certificate](#) [🔗](#)

Workshop on Django

[Certificate](#) [🔗](#)

Introduction to Airflow

[Certificate](#) [🔗](#)