## **Arun Joshi**

### Profile

Aspiring Machine Learning Engineer with a solid foundation in AI/ML. Passionate about using machine learning to solve complex problems and drive innovation. Seeking opportunities to apply and expand my skills in a dynamic, growth-oriented environment, with a long-term goal of becoming a leading expert in the field.

### Professional Experience

10/2021 - 03/2022 Lalitpur, Nepal

### **Research and Development Intern,** *Robotics Association of Nepal*

- Proficient in pandas, Numpy, Seaborn, MatplotLib, Scikit-Learn, and basic TensorFlow.
- Researched robotics and emerging technologies like Arduino and NodeMCU.
- Analyzed data to support research and development projects.
- Assisted in prototype development, testing, and evaluation.
- Collaborated with researchers and engineers on innovative solutions.
- Strong understanding of robotics and related technologies.
- Quickly adapted to new technologies and concepts.
- Conducted workshops on Robotics and Aviation for 1000+ children in 4 schools under "Ujjwal Education Nepal."

12/2021 - 04/2022 Kathmandu, Nepal

### **Paid Tutor,** *Trinity International College*

- Gave orientation classes on Physics, Mathematics to over 100+ students of AS Level (11th grade).
- Helped an A-level Junior to understand the core concepts of Math, Physics, Computer Science, and Chemistry; helped him develop his problem-solving and critical thinking skills.

### Education

03/2023 - present Kathmandu, Nepal

#### **BSc(Hons) in Computing with AI, Islington College**

06/2019 - 01/2022 Kathmandu, Nepal

### **High School,** *Trinity International College*

- Achieved a perfect GPA of 4.0 in both 11th and 12th grade.
- Courses taken in Mathematics, Physics, Further Mathematics, Computer, Chemistry, and English.

# Clubs and Organization

08/2022 - present Kathmandu, Nepal

### **Together We Learn,** *Member*

- Brainstormed in event planning and feedback sessions during 10+ general meetings.
- Technical backup during Python Workshop events held both online and physically.

10/2021 - 03/2022 Kathmandu, Nepal

### **Robotics Association of Nepal,** *Member*

 Had the unique opportunity to be part of a team developing an agricultural drone. My contributions included programming and testing the drone's control systems, as well as troubleshooting issues that arose during development.

### Awards

### Highest GPA Achiever, Mahendra Bhawan School

• Awarded highest GPA achiever in School by Private and Boarding Schools' Organization Nepal (PABSON).

### Best Student of the Year, Mahendra Bhawan School

• Awarded with the best student of the year 2018-2019.

### Projects

#### **Stock Market Prediction**

- Developed a predictive model using basic recurrent neural network (RNN) architecture.
- Implemented the model to forecast stock market trends based on historical data.
- Utilized the previous 30 days' worth of data to train the model.
- Incorporated graphical representation to illustrate predicted closing prices against actual closing prices.
- Enabled the model to make forward-looking predictions regarding future closing prices.

### **Chatbot Development**

- Used the Cornell Movie-Dialogs Corpus dataset containing 220,579 conversational exchanges between 10,292 pairs of movie characters.
- Utilized word2vec with the Gensim library to embed words into vectors.
- Implemented a Sequence to Sequence model with an encoder, LSTM layers, and decoder.
- Created a chatbot capable of generating contextually relevant responses based on movie dialogue data.

### **Image Classification**

- Created an image classification model using TensorFlow that can accurately identify three types of animals: horses, dogs, and cats.
- The model was able to achieve an impressive accuracy rate of over 80%, meaning that it can correctly identify the animal in the image in 80% of the cases.

### **Website Development**

- Developed advanced backend features for dynamic websites using Java Enterprise Edition (JEE).
- Implemented robust authentication and validation mechanisms to enhance security.
- Performed CRUD operations and authentication filters.
- Implemented full-stack development by learning front-end and back-end technologies.
- Used 'MySql' as the database for storing the data.
- Implemented the MVC architecture during the project development.

### **Flutter APP**

- Developed an A-levels Notes App that consists of notes and past papers of Physics and Mathematics for A-level students to help them understand and practice the core concept of syllabus topics.
- Has a solid 5-star rating and over 5K+ downloads.

#### **Agricultural Drone**

- Installed new firmware in the Pixhawk 2.4.8 (a flight controller) of the drone using Mission Planner.
- Tested the spraying mechanism of the drone.

## Skills

**Soft Skills** — Communication | Critical Thinking | Problem-Solving | Team Work | Leadership •

Technical Skills — Deep Learning | HTML, CSS, JS | Flutter, Dart | Python | NumPy, SciPy | Seaborn | Scikit-

Learn | Pandas | TensorFlow | Java

## Languages

Nepali | English | Hindi

## **♂** Hobbies and Interest

Physics and Calculus | Programming | Web design | Deep Learning | Machine Learning | Natural Language Processing | Competitive Online Gaming | Basketball | Chess

## Certificates

• Flutter and Dart-The Complete Guide[2023 Edition] ☑

## **♣** References

Bikash Gurung, President, Robotics Association of Nepal