

# Manoj Kumal

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## EDUCATION

- **Bhaktapur Multiple Campus, Tribhuvan University** Bhaktapur, Nepal  
*Bachelor in Computer Science & Information Technology* 2018 - present

## EXPERIENCE

- **Associate AI Engineer**  
*Dogma group* March 2022 - Present
  - Worked on an information extraction system for sales invoices and purchase orders using two approaches, the first of which was a purely rule-based approach.
  - The second approach involved extracting header and footer information using LayoutLM, and extracting table information using Table Transformer.
  - Fine-tuned LayoutLM and Table Transformer models on my own dataset and deployed model using Azure App service.
  - Worked on Contrastive Language-Image Pre-training model to detect similar images using both images and corresponding text for training.
- **Machine Learning Engineer Associate**  
*Bottle Technology* Dec 2021 - March 2022
  - Worked on Named Entity Recognition system that extracts information from both the front and back images of Nepali citizenship documents.
  - Developed a API and deployed model using AWS EC2.
- **Machine Learning Intern**  
*Bottle Technology* Sep 2021 - Nov 2021
  - Learned about Python, Numpy, Pandas, and Matplotlib etc.
  - Understand and implements ML algorithms like Linear Regression, Decision Tree and Random Forest etc.
  - Learned about different DL algorithms and also developed Covid detector from X-ray images using CNN.

## PROJECTS

- Developed automatic nepali vehicle number plate detection using number plate detection from images. Also, done image segmentation and developed a classification model using convolution neural network for character recognition.
- Developed a flight price prediction system to predict a flight price using their features and Performed data science project life cycle like EDA, feature engineering, feature selection, model creation, model evaluation, hyper parameter tuning.
- Developed a bank loan prediction system to classify whether the customer is Defaulter or not and used different classification algorithms likes Logistic Regression, KNearest Neighbor and Random Forest classifier also done Hyper parameter tuning.

## PRESENTATION

- **Workshop on Artificial Intelligence and Sustainability**  
*Prime College, Kathmandu, Nepal* 16<sup>th</sup> Jul, 2022
  - Among 80 participants, a presentation was given on the topic of Artificial Intelligence, including supervised, unsupervised, and reinforcement learning.
- **Workshop on Artificial Intelligence and Machine Learning**  
*Bhaktapur Multiple Campus, Bhaktapur, Nepal* 1<sup>st</sup> - 5<sup>th</sup> Jan, 2022
  - Presented on the basics of Python, including NumPy, Pandas, and Matplotlib, as well as some classification and regression algorithms.
  - Presented over 80 participants, covering the basics of linear algebra, statistics, and probability. In addition, a classification and regression project was developed.

## SKILLS

- **Programming Languages:** Python, C, C++
- **Machine Learning:** Pytorch, Tensorflow, Numpy, Pandas, Matplotlib, Scikit-Learn, OpenCV, Spacy, NLTK, CometML
- **Backend:** Django, Rest framework, Flask, Fastapi, Streamlit
- **Frontend:** HTML, CSS, ReactJS, Bootstrap
- **Database:** MySQL, MongoDB
- **Deployment:** Docker, AWS, Azure
- **Soft skills:** Leadership, Teamwork, Time management, Good communication
- **Languages:** English, Nepali, Hindi