# PRIYANKA PAUDEL

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## RESEARCH INTEREST

My research lie in **Machine Learning, Deep Learning, Computer Vision & Pattern Recognition, Natural Language Processing, Cognitive Science, Neuroscience, Healthcare**.

## SKILLS

**Languages** : Python3,C,C++,PostgreSQL, MySQL,scipy, numpy, pandas, matplotlib, NLTK,spacy, tensorflow, pytorch,nltk

**Tools** : Git,GitHub, Notion, Jira, Trello, Miro, Google Analytics

**Soft Skills**: Team Player, Communication , Hardworking , Passionate

## EDUCATION

### UNDERGRADUATE

December. 2015 – December 2019

*Bachelor's in Computer Engineering(70%)*

Tribhuwan University,Kathmandu

- **Extra Courses Outside of College**:
  48 hours training on Java organized by Himalaya College Of Engineering,
  48 hours training on PHP organized by Himalaya College Of Engineering,
  48 hours training on Python organized by Himalaya College Of Engineering,
  Attended a 2-days workshop on Git Github organized by LeapFrog Technology(Headquaters USA),
  Attended a 3-days Audrino Workshop Organized by Advanced College Of Engineering
- **Extra Involvement**: Active Member of Himalaya Science & Technology Exhibition Committee (HEX:Committee Member),
- **PERCENTAGE**:Secured **78%** in the **last semester** in undergraduate degree

## RESEARCH EXPERIENCE

### Fusemachines

November 2021- Present

*Machine Learning Engineer(R&D)*

* Researched on various **supervised** and **unsupervised paradigms**(i.e **Kmeans,DBSCAN,Hierarchy based Clustering algorithm**) for classification of data into multiple classes i.e suspicious, phishing and not phishing using html content and urls
* Worked on whole **ML pipeline**, regulation, updation, and validation of models for production environment using **AWS infrastructure**
* **Brand Logo Detection** for phishing and not phishing classification problem using Transfer Learning on **YOLO V3**
* Conducted a one-day workshop at **Himalaya College Of Engineering** ,**Prime IT College Nepal** as a representative from **Fusemachines OutReach Team** and provided Knowledge Sharing Sessions on AI, Machine Learning, Data Science with a full-fledged project pipeline and live coding

### Feather Webs Nepal

August 2022-Present

*Machine Learning Engineer (R&D)*

* Performed transfer Learning **fine tuning** of BERT model for Name Entity Recognition, Joint Name Entity Recognition, and Question Answering Tasks to build applicant tracking system that recommends job applicants to the recruiter.Used Resume Parsing,Segmentation and Matching to perform recommendations to user.
* Built robust chatbot system using RASA for

### National Innovation Centre Nepal

December 2020 – Nov 2021

*Computer Vision Engineer (R&D)*

Kritipur, Nepal

- Transfer Learning **fine tuning and use of** of models based on the available data quality and quantity
- **Face Recognition Using Azure Cognitive Services** Implemented Fully in Python

- Research of **Image Processing techniques like Edge Detection,Finding Contours,Segmentation** to compensate various Localization problems in SLAM and robotics
- Face Recognition For Robotic Vision Using Face Recognition Library
- **Object Detection** Using MobileNetSSD and YOLO
- Implementation of Object Detection Models in **Edge Devices** like Tensor Processing Units and Jetson Nano,RaspberryPI
- Conversion of Models into light versions like **TFLite Models** and **fully quantized models** for use in edge devices
- Custom Object Detection Using **Azure Cognitive Services**
- Centroid Based Object Tracking and its implementation with **TPU Detections**
- Object Tracking with **DeepSort** for implementations on TPU Detections
- Object Tracking with **Sort** for implementation in TPU Detections
- Benchmarking of various **SOTA** algorithms in various resource-constrained devices

## PERSONAL PROJECTS

### Pneumonia Detection Using CNN

- Classification of Pneumonic and non-pneumonic Chest-Xray Images Implemented in Keras gaining around **85% accuracy**
- Collected raw dataset for the purpose from BirHospital(Nepal)
- Performed Data Cleaning,Data Preprocessing,Solved DataImbalance Problems and Performed Data Augmentation on available datasets

### Restaurant Management System With Data Visualization

- A MIS system that provided ordering of food items, invoice and billing
- Data Visualization Techniques were used to track the customer rise and fall for a particular period of time and hence give feedback of sales and customer growth status using graphs

## COURSES COMPLETED AND CERTIFICATIONS

- Microdegree in Machine Learning Fusemachines :6 months)
- AI for Everyone: COURSERA (5 weeks)
- AI for Medical Diagnosis:COURSERA : (6 weeks)
- Structuring Machine Learning Projects:COURSERA :(5 weeks)
- Machine Learning Data Life Cycle In Production :COURSERA: (9 weeks)
- Analyze Datasets and Train ML models using AutoML :COURSERA: (9 weeks)
- Hyperparameter tuning,regularization and optimization:COURSERA : (9 weeks)
- Convolution Neural Networks :COURSERA: (6 weeks)
- Intro To ML in Production:COURSERA : (3 weeks)
- Convolution Neural Networks:COURSERA : (4 weeks)
- Python Data Structures:COURSERA : (7 weeks)
- Using Python to Access Web Data:COURSERA : (8 weeks)