ROSHANI ACHARYA

Curriculum Vitae

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SUMMARY

Computer Science and Information Technology student. Responsible, passionate and committed with get-it-done approach. Experienced in computer vision, natural language processing and optical character recognition project using Python.

PERSONAL DETAILS

Date of birth: 21 June, 1997
Language: English, Nepali, Hindi
Gender: Female
Nationality: Nepali
Permanent Address: Semlar-5, Rupandehi, Nepal

EDUCATION

Year	Level	School/College	Grades
2012	SLC	Abhishek Gyan Mandir Secondary School	83%
2013-2014	+2 (Science)	Pentagon International College	66.40%
2015- 2019	Bsc.CSIT	Samriddhi College	78%

WORK EXPERIENCE

Machine Learning Engineer Level II at **Fusemachines Nepal** Jan, 2020 – On Going
Engaged in developing Artifical Intelligence based Enterprise level software solutions.
Primary Responsibility: Research, Build AI based services and API
Skills: NER, Speech Recognition, Pytorch, Flask, FastAPI, Elasticsearch, MongoDB

Software Engineer, Machine Learning at **Treeleaf Technologies** March, 2019 - Jan, 2020
Engaged in developing Artifical Intelligence based Enterprise level software solutions.
Primary Responsibility: Research, Build AI based services and API
Skills: OpenCV, NLP, OCR, ASR, Tensorflow, Keras, Django, Flask

AI intern at **Treeleaf Technologies** Aug,2018 – Feb,2019
Primary Responsibility: Training, Testing, Evaluating Models, Creating GUI, Research to improve accuracy of the system
Skills: Python, Keras, Tensorflow, OpenCV, PyQT

SKILLS

- Programming languages: C/C++, Python, SQL
- Operating systems: Windows, Linux, Android
- Databases: MySQL, MongoDB, Elasticsearch
- Tools: Microsoft Office, LibreOffice, Git, Jira
- Libraries: Numpy, Pandas, PyQT, Keras, Tensorflow, OpenCV, Gensim, DeepSpeech, Kaldi, Tesseract, PyTorch, Transformers
- Frameworks: Django, Flask, FastAPI
- AWS experience with S3, SQS, EC2, SageMaker, Athena
- Sound knowledge of Object-Oriented programming, Software Engineering Practices and Researching

AREA OF INTEREST

- Artificial Intelligence
- Computer Vision
- Natural Language Processing
- Data Science
- Research
- Photography
- Blogging
- Social Activism
- Traveling

PROJECTS

Ursula (2021)
Technology used: Python, Tokenizer, Fasttext, Faiss
A phishing detection engine which on first phase that takes URL as an input, extracts it's html content using ask and or chrome driver, encode the tokenized html content and extract the TF-IDF of the content to predict using Random Forest Algorithm if the URL belongs to phishing sites or legitimate sites. And on second phase, it takes URL as an input, extract it's features and predict using XGBOOST model.

Fuse Classroom (2020)
Technology used: Python, Elasticsearch, FastApi, SBERT
A student progression tracking system that can categorize students into three different categories based on the data which shows the involvement of students in their respective classes. Experimentation was done with Machine learning algorithm and semi-supervised algorithm . And a plagiarism detection engine was develop to find the plagiarized status of the assignment uploaded by the student within the platform. SBERT, Elasticsearch and FastApi was used for building plagiarism detection engine.

Exscribe (2020)
Technology used: Python, BERT, Transformers
The text was extracted from the audio conversation of the doctors and orthopedic patients. From the text extracted NER technology was used to extract important information from the conversation. Namely, 8 different important fields within orthopedic data records were being filtered from the raw conversation.

DOEV (2019)
Technology used: Python, Tesseract
Doev is AI based multi model product search system. It uses Optical Character Recognition(OCR) and barcode reader technology to extract the unstructured text from any product image and uses computer vision to classify the product images based on mutiple features extracted from an image.

VIXX(2019)
Technology used: Python, Django, OpenCV, Tensorflow
VIXX is AI-powered smart parking and visitor management system. It uses computer vision to detect, track and count the number of vehicles and person appeared within a surveillance video. It also provides the reporting and analysis of powerful insights: the flow of traffic, number of vehicles, classification of vehicles, tracking of vehicles, in-store traffic, enhance staff management, evaluate the effectiveness of promotions and marketing events, etc.

Identy(2019)
Technology used: Python, OpenCV, Tensorflow, Tessaract
An automatic KYC process which uses AI for establishing customer's valid identity. This product is capable of liveness detection of a human face to prevent identity theft, Optical Character Recognition (OCR) to extract valid data from the ID document, ID verification to ensure the ID is valid and undoctored and face comparison to ID document to increase identity assurance.

TreeBot(2019)
Technology used: Python, Pykaldi, ASR
It is an automatic speech recognition system that is capable of converting nepali speech into text.

Sentiment Analysis(2019)
Technology used: Python. Gensim, NLP
A sentiment analysis project that uses natural language processing to calculate the word embeddings and find similarity among the words to categories them into human sentiments. 2 GB of nepali data were scrapped and trained on np2vec and fasttext model. Testing and evaluation was performed on question-words text file which was manually created with accuracy of 90% and above.

Vincell (**2019**)
Technology used: Python. OpenCV, Keras, Tensorflow
A video analytic solution that uses bio-metric information like a person's face to authenticate a user and identify the person in a database of photos or videos . The application is also capable of categorizing a persons emotion, verify the liveness of human face, check the eye blink status and track the movement of any person in the video feed.

Facial Emotion Recognition (**2018**)
Technology used: Python, OpenCV
Detect human face in an image or video and categorize people faces based on the emotion shown by the facial expression using SVM Classifier.

Characters recognition (**2018**)
Technology used: Python
Trained a back propagation neural network based on gradient descent to classify english and nepali numbers and letters based on mnist dataset.

HIV/AIDS Performance Prediction System (**2018**)
Technology used: Python, Flask, Android
A Performance Prediction System of ongoing treatment of HIV/AIDS infected patients, using data mining modeling technique, namely, Naïve Bayes. Data for building this system was collected from National Center for AID and STD Control (NCASC) from 2060 B.S to 2068 B.S. Using medical profiles such as age, sex, CD4 values, WHO stage it can predict the performance of patients suffering HIV/AIDS. The system categories medical data into three performance-based categories good, moderate and bad.

Data Analyzing (**2017**)
Technology used: Python
Data analysis made on a set of data extracted from Kaggle and predicted certain outcomes on the basis of those data. Data sets included a list of data showing day-to-day bike rental transaction of a certain place, natural disaster effected areas and prediction made were: prediction for next year bike-rents, chances of occurring disaster twice in a particular area and so on.

TRAINING

Wearables Apathon2015- Bootcamp, organized by Microsoft Innovation Center Nepal (2015)
Human Rights Apathon2016- Bootcamp, organized by Microsoft Innovation Center Nepal (2016)
Public Speaking Workshop, organized by We Inspire Nepal (2016)
Django Girls Kathmandu Workshop2, organized by Django Girls Kathmandu (2016)
A Workshop on Technical Writing for IT Professionals with Radhika Menon, organized by Samriddhi College(2017)
Web development Course, organized by Samriddhi College (2017)
Data Science in Python, organized by Leapfrog Academy (2017)
Udhyami Seed Camp, organized by Startups Nepal (2017)
Android App Development, SilpTech IT Solutions (2017)

HONORS AND AWARDS

Top 3 Best Idea, Nepali Ideas for Nepal Nirman, organized by Microsoft Innovation Center Nepal and United Nations Development Programme (March, 2016)
Microsoft Student Partner 2017 (July, 2016)
Organizer for Django Workshop3(2016)
First Position, Inter-CSIT College Quiz Competition (2016)
Winner, Film for Climate, organized by The Green Voice (2017)
Best Idea, Yomari Codecamp (2018)
First Position, WebTech Day(HTML, CSS, Bootstrap and JavaScript) (January,2018)
Mentor for TensorFlow 2.0 & Keras Session, DevFest 2019 Kathmandu

PROFESSIONAL TRAITS

A passion in interested fields
Strong leadership quality
An innovative and creative thinker
Disciplined and good etiquette