# **NISHESH AWALE**

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### **Education**

Institute of Engineering, Pulchowk Campus, Tribhuvan University

B.E. Electronics & Communication, Aggregate: 85% (University Topper)

**Lalitpur, Nepal** 2016 - 2021

## **Experience**

Al Engineer

June 2022 - Present

Seelogic International

- Lead the project to develop a system that ranks the clients based on the Customer Relationship Management (CRM) and Enterprise Relationship Management (ERP) data.
- O Developed project timeline and project plan to carry out the necessary tasks for the project.

## Machine Learning Engineer Level I

January 2022 - June 2022

**Fusemachines** 

- Lead the project to develop a classification model to detect fake Louis Vuitton, Chanel and Gucci bags from the real ones. Located different areas of interest in the images to extract meaningful information which improved sensitivity from 90% to 95% and specificity from 87% to 95%.
- Created a system to rank the resumes of candidates based on the job description. Performed topic
  extraction to select relevant skills from the resume and job description.

## Machine Learning Engineer Associate

April 2021 – December 2021

**Fusemachines** 

- Developed AI enabled product to extract information from handwritten forms. Improved Nepali OCR system for handwritten text upto 25% character error rate with regularization, hyperparameter tuning and error analysis.
- Worked on AI models to detect tables in financial documents. Experimented with both machine readable and scanned pdf (both bordered and borderless).

## Machine Learning Engineer / Freelancer

July 2020 - November 2020

Selcouth Technology

 Developed a deep learning system to perform continuous authentication of smartphones from the behavioral data using mobile sensors.

#### AWS AI/ML Intern

September, 2020 – December, 2020

Genese Solution

 Understood about cloud computing and hosting web server as well as other different services on AWS.

## **Publication**

 Sangam, Nishesh (2022). CNN-Based Continous authentication of Smartphone using Mobile Sensors. International Journal of Innovative Research in Advanced engineering (Vol.9, Issue8, pp.361–369). AM Publications, Ind doi:10.26562/ijirae.2022.v0908.37  Awale, N., Pandey, M., Dulal, A. & Timsina, B. (2020). Plagiarism Detection in Programming Assignments using Machine Learning. *Journal of Artificial Intelligence and Capsule Networks*, 2(3), 177-184. doi:10.36548/jaicn.2020.3.005

### Awards and Honors

2021
2020, 2019 & 2017
2020
2020
2019
2019
2019
2016

## **Teaching and Mentorship Experience**

### Hardware Fellowship

 $25^{th}$  November, 2019 -  $5^{th}$  December, 2019

**LOCUS 2020** 

- Taught about Arduino programming and electronic hardware design for almost 100 students from freshmen and sophomore year.
- $\circ$  Mentored a group from junior year to carry out their project for display in the  $17^{th}$  National Technological Festival of our college.

## Children in Technology

 $14^{th}$ ,  $15^{th}$  &  $16^{th}$  November, 2017

**LOCUS 2018** 

 Conducted sessions for different high schools in Nepal to teach their students about the basic electronics and programming.

## **Exchange Program and Fellowship**

### Sakura Science Exchange Program

 $16^{th}$  –  $23^{rd}$  December 2019

Japan Science and Technology Agency

- Hosted by National Institute of Technology, Kisarazu, Japan in which different sessions, paper presentations and industrial visit were held.
- Attended seminars on emerging technologies used in Japan such as Artificial Intelligence and Internet of Things(IOT).

Al Fellow April 2019 - March 2020

**Fusemachines** 

- Learned about linear algebra, probability & statistics necessary for machine learning and did hands-on projects.
- o Completed two courses on Artificial Intelligence and Machine Learning of Columbia University on

edX.

### First Nepal Winter School in Al

 $20^{th} - 30^{th} December 2018$ 

Nepal Applied Mathematics and Informatics Institute for Research (NAAMII)

- Attended mathematics and machine learning / deep learning sessions from distinguished professors and guest speakers.
- o Completed lab works on machine learning, computer vision and natural language processing.

## **Presentation**

 $6^{th}$  International Workshop on Effective Engineering Education  $15^{th}$  -  $22^{rd}$  March 2019 National Institute of Technology, Kisarazu, Japan

- Presented our project of plagiarism detection in programming as well as electronic text assignments among 100 participants.
- Different features were computed from the programming assignments and xgboost was used as a classifier. For electronic text assignments, sentenct BERT was used to generate the encodings and FAISS was used for similarity search among the sentences.

 $5^{th}$  International Workshop on Effective Engineering Education  $16^{th}$  -  $23^{rd}$  December, 2019 National Institute of Technology, Kisarazu, Japan

- Presented our project related remote health care among 100 participants in which the data from different health sensors were sent to the doctor over the Internet.
- o ECG classifier system was also developed to predict different levels of arrhythmia.

## **Skills**

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