



SONIKA ACHARYA

Kathmandu, Nepal

 [linkedin.com/in/soneekaacharyaa](https://www.linkedin.com/in/soneekaacharyaa)  acharyasonica@gmail.com

 +977-9860470708  github.com/soneekaacharyaa

EDUCATION

Bachelor of Science in Computer Science and Information Technology

Tribhuvan University

Dec 2018 - Dec 2023

Related Courses: Mathematics, Discrete Structure, Statistics, Data Structure and Algorithms, Artificial Intelligence, Database Management System, Information Retrieval, Data Warehousing and Data Mining, Advanced Database

Percentage: 80.79% (Distinction)

High School

National Examinations Board

July 2015 - May 2017

St.Xavier's College, Maitighar

Percentage: 74.00% (First Division)

WORK EXPERIENCE

Fusemachines

Aug 2023 - Present

Machine Learning Engineer

- Preprocessed and formatted data to optimize input and fine-tuned LayoutLM model to extract information from legal documents.
- Worked on an end-to-end pipeline for financial document information extraction, integrating DETR and DiT models. Post-processing included regex for pattern extraction and LLMs for context-aware extraction.
- Researched various papers on arbitrary shaped text detection and evaluated findings based on accuracy and limitations to determine the best architecture for implementation.
- Engaged in knowledge-sharing sessions, conducting and reviewing papers on topics such as Explainable AI and Model Quantization.

TAI Inc.

Dec 2022 - March 2023

Machine Learning Engineer (Intern)

- Developed the TAICChat API endpoint, seamlessly integrated into the web project, facilitating general conversation and providing comprehensive information about TAI.
- Developed an application for eye gaze detection as a part of Computer Vision project.

TECHNICAL SKILLS AND KNOWLEDGE

Programming Languages

C, C++, Java, Python, Prolog, C#

Data Analysis Tools

Excel, SPSS, STATA, GPSS, Weka, Pandas, Matplotlib

Database

MySQL, MongoDB, PostgreSQL

Frameworks

PyTorch, Django, TensorFlow, Scikit-learn, Keras, .NET

Cloud Computing

AWS (EC2, S3, RDS, Lambda)

General Skills

Leadership, Communication, Team Management, Project Management, Adaptability and Flexibility

OTHER QUALIFICATIONS

**Microdegree™, Artificial Intelligence
Fusemachines**

March 2022 - Jan 2024

- Machine Learning, Deep Learning, Computer Vision, and Natural Language Processing (3 months of each course with online lectures, coded and paper assignments, and four capstone projects)

PROJECTS

Speech Emotion Recognition

Python, Numpy, Pandas, Scikit-learn

- Utilized the RAVDESS dataset for processing audio signals using MFCC feature extraction.
- Applied traditional machine learning classification algorithms to classify emotions based on the extracted features.

Image Caption Generator

Python, CNN, LSTM

- Developed an image caption generator using the Flickr30k dataset, integrating ResNet-50 architecture for image feature extraction and unidirectional LSTM for caption generation.
- Evaluated model effectiveness with BLEU score as the metric.

ChatBot

Python, LSTM

- Utilized word embeddings (Word2Vec), LSTM layers, and a dense layer with softmax activation for intent classification.
- Integrated a retrieval-based chatbot to generate responses based on predefined responses corresponding to identified intents.

Eye Gaze Detection

Python, CNN

- Worked on MPIIGaze dataset and utilized Dlib for facial and eye landmark detection.
- AlexNet-based CNN was used to predict gaze angles theta and phi for determining gaze direction.

Image Cartoonization

Python, OpenCV

- Implemented an image cartoonization algorithm using OpenCV, transforming regular images into cartoon-like representations through edge detection, color quantization, and merging techniques.

Resume Parser

Python, LLM, Pinecone, Langchain

- Developed a resume parser tool using Streamlit and Langchain to extract information from PDF resumes uploaded by users.
- Integrated Mistral AI for natural language understanding and Pinecone for vector storage to facilitate efficient data retrieval and processing.

CERTIFICATION

100.00 hrs training on Python with Django, Neosphere

Machine Learning Program, Fusemachines AI Fellowship 2022, Fusemachines

Deep Learning Program, Fusemachines AI Fellowship 2022, Fusemachines

Computer Vision Program, Fusemachines AI Fellowship 2022, Fusemachines

Natural Language Processing Program, Fusemachines AI Fellowship 2022, Fusemachines

Coursera Convolutional Neural Network, DeepLearning.AI

LEADERSHIP EXPERIENCE

Leapfrog Technology

Dec 2022 - March 2023

Leapfrog Student Partner

- Led and cultivated tech communities, fostering learning and growth among peers.
- Acquired skills in development, design, technology, and business through industry-led sessions and training.

Code for Change

Dec 2020 – Dec 2021

Vice Treasurer

- Worked with a team of over 50 executive members from across five cities in Nepal to facilitate leadership development in 300+ youths.
- Managed budget planning and financial operations as Vice Treasurer. Also served as event host, manager, and trainer for various organization events.

Code for Change

Dec 2019 – Dec 2020

Operation Lead

- Worked with a team of over 30 executive members from across five cities in Nepal to facilitate leadership development in 200+ youths.
- Managed events as host, manager, and trainer, contributing to organization, documentation, proposals, and agenda formation. Actively volunteered for sessions, workshops, and events.