(DOB:1996/Oct/20)
https://shreyniraula.com.np

SHREY NIRAULA

(Awared with Ncell Scholarship and Excellence Award 2019)

Suryakot, Koteshwor, Kathmandu-32, Nepal

Tel: +977-9860298717, 01-5100439
Email: nshrey53@gmail.com , 073bex443.shrey@pcampus.edu.np
LinkedIn: https://www.linkedin.com/in/shrey-niraula-27947b189/
GitHub: https://github.com/ShreyNiraula

OBJECTIVE

To learn new technology especially in the field of Data-science, Artificial Intelligence and apply my knowledge and understanding to create innovative project that could uplift the social and economic condition of my country, Nepal.

SKILLS & ABILITIES

Programming

C & C++
Python (Fundamentals, OOP, Libraries)
MATLAB
JavaScript (Basics, ES5+ and DOM)
Assembly (Assembly 8085/86 and fundamentals of objective-C)

Database: Relational Database SQL, its design and implementation. Also some knowledge on NoSQL such as MongoDB.

Artificial Intelligence and Machine Learning

Neural network, Machine learning, Deep learning. And tools: Tensorflow, Keras

Web Development

Front side- React, Redux, JS, Jquery

LANGUAGES

- Nepali
- English
- Japanese

STRENGTH

- Hardworking
- Loves to solve the problems
- Moves only after clearing the concept

HOBBIES

- Films and Movies
- Photography

AWARDS

- Winner of Hardware Thematic Competition, Locus Nepal, 2019
- Ncell Scholarship and Excellence Award 2019

Backend side- Django, Flask, Node , Express

Version Control System
Git and GitHub

ROS & Microcontroller
ROS & also Arduino and Fundamental AVR coding

Command Line
Linux commands and basic scripting

Communication Skills
Have speaking skill to convey the thoughts and message.

EDUCATION

Kanjirowa National School (*Koteshwor, Kathmandu, Nepal*)

Completed: 2014
Board: SLC [grade 10] (88.75%)

Capital H S School (*Koteshwor, Kathmandu, Nepal*)

Completed: 2016
Board: HSEB [grade 11&12] (86.10% Aggregate)

Pulchowk Campus – Institute of Engineering, Tribhuvan University (*Lalitpur, Nepal*)

Completed: -----
Currently: Given final examination
Faculty: Bachelors in Electronics and Communication Engineering
Percentages: I – 86.62%, II - 88.92%, III - 84.68%, IV - 88.35%, V – 77.94%, VI – 81.21%

PARTICIPATIONS

- Certificate of Participation, Locus 2015
- Disaster Hack Certificate of Achievement, AT-Hackathon 2018
- Certificate of Appreciation, Locus 2019 (Participation in Hardware Project Competition)
- Certificate of Appreciation, Locus 2019 (Winner of Hardware Thematic Competition)
- Second Nepal Winter School in AI-NAAMII
- Quantum Hack

ONLINE CERTIFICATIONS

- Machine Learning, Coursera
- DL0320EN: Applied Deep Learning Capstone Project (EDX)
- Deep Learning Specialization Coursera
  - Neural Networks and Deep Learning
  - Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization
  - Structuring Machine Learning Projects
  - Convolutional Neural Networks
  - Sequence Models
- SQL for Data Science, Coursera
- Server-side Development with NodeJS, Express and MongoDB
- Front-End Web Development with React

PROJECTS

a. Real Time Visual Localization and Mapping of Mobile Robot in Dynamic Environment

It is final year project, carried out by four member team, where the project tries to aim for the mobile robot localization and mapping in dynamic environment. The project includes the SLAM implementation and deep learning approach for dynamic obstacles detection.

In this project, my task was to handle the dynamic obstacle detection using image segmentation method. For this, I have tested with semantic segmentation model to remove the dynamic obstacle especially human being so that the feature from human beings are excluded from the environment to yield the correct map of the environment.

b. Vehicle Traffic Management and Analysis

It is minor project in which the traffic condition of Kathmandu valley especially in Koteshwor, Jadibuti and Locanthali places were analyzed. The current situation lacks the traffic light operation because of unmanageable situation of traffic volume. We tried to come up with new way of management with synchronized traffic lighting up system. Algorithmic implementation was proposed to ease the situation which somehow gave better result than current implementation.
My portion included the construction of web application that could let us simulate the real Koteshwor, Jadibuti and Locanthali junctions. Web app was also linked to hardware portion to demonstrate. Webapp included feature to login for authorized user, graphs, simulation portion and many more. AJAX, Jquery, Js, BootStrap, CSS etc were used for frontend side and in backend side, Flask was used.

c. Precision Livestock Farming

The project includes two aspects: Behavior Analysis of poultry(chicken) and automation of equipment needed in poultry farm. Behavioral analysis to analyze the health condition and prevent them from suffering bird flu. Automation includes instruments such as light bulbs, heaters through the mobile application. My task involved was mobile app and backend process and data handling. Simple mobile application was created that could send the command to stop instrument, increase the value of instrument parameter(such as to raise the temperature of heater) to server (flask based) in raspberry Pi that then sends the command to hardware portion to actually actuate the instrument. Real time data handling was made possible and real time data could be observed in mobile app even in graphical format. It is project under Locus Event (carried at Pulchowk Campus), 2019.

d. ABU Robocon 2019 stage simulator

Computer Graphics group project simulating ABU Robocon stage involving lighting, surface detection, sharers, and coordinate transformation (Camera). It is written in C++ and openGL is implemented. My part was the creation of base system for integrating other components aspects such as camera transforms, detection collision, model loading. I also

worked on lighting model to demonstrate effective lighting on model constructed. [https://github.com/ShreyNiraula/openGL]

e. Blind-Eye

It is project performed under AT-Hackathon, that includes the wearable VR-like set created using 3D printing that detects the obstacle in front of blind person and sends the signal to controller that controls the custom made mobile application to tell user that there is obstacle in form of voice in both English and Nepali languages. My task included the custom design of the wearable VR for 3d printing.

f. Poploon

C based group project (game) implementing graphics.h. My task was to create the gaming graphical part.

g. Chatbot

C++ based group project, that includes Natural Language Processing and Graphical User Interface GUI (with the help of SFML) implemented for chatbot. My portion included the construction of GUI for chatbot messenging.