**Why masters?**

It's been a while since I graduated. I want to continue my study to build up my career in research.I see a lot of research exploration in doing masters which will enhance my skill which I can implement to conduct research in my own country.

**Why not Nepal ?**

I want to study Computer Science specialization in Informatics and Machine Learning.

There is no course with much focus on them. Other relatable courses offered by Universities of Nepal focus on theoretical approach. Similarly, the courses offered by few training institutes focus on tools rather than research. On the other hand, the US has abundant research opportunities with exposure to advanced infrastructure that will enrich my skills and help me to conduct research in Nepal.

**Why USD?**

I reached out to the professor Dr.KC Santosh for research and he has offered me a GA lowering my COA. Similarly, the course offered by the USD Including ML fundamentals , Computer Vision , Design Analysis, Computer Algorithm perfectly matches with my interest and relevant work experiences. Moreover, I am highly interested in working with Professor Dr. KC Santosh who is renowned for his excellence in Machine learning and informatics. I think I will get a lot of opportunities to learn .

**What is your plan after Graduation?**

After my graduationI will come back to Nepal to continue to work as Machine Learning Researcher in Global Institute for Interdisciplinary Study(GIIS) which currently focuses on the environmental effect of climate change**. My first goal is to study the effect of climate change in the Himalaya range using machine learning algorithms such as computer vision.Finding the dark spots which have lost the snow and ice due to climate change and predict the possible effects on the environment. My second goal is to conduct research on the Risk assessment of aviation implementing predictive safety management through machine learning technologies using large amounts of data to facilitate predictive modeling.** That will help reduce the occurrence of the accident which is the most prominent event in Nepal sky.

Predictive risk Management Principle:

1.Performing risk management activities on hypothetical Hazard,risk events or consequences.

2.consider the danger risk that might occur in a real scenario.

Predictive risk management is **the process of performing risk management activities on hypothetical hazards, risk events, and/or consequences**. Predictive risk management is an attempt to account for hazards and risks that can potentially occur in a given situation.

Predictive risk management is the process of carrying out risk management tasks on hypothetical threats, potential occurrences, and/or outcomes. The goal of predictive risk management is to take into consideration dangers and risks that might exist in a specific circumstance.

**Voi**

**The predictive approach to aviation management involves gathering data in order to identify possible negative future outcomes or events by analyzing system processes and the environment to identify potential future hazards and initiating mitigating actions.**

**Why USA?**

I choose USA universities because they have abundant opportunities for research. They also provide well recognized programs that correspond with my field of interest including graduate assistantship master which I have obtained that has made my masters degree more affordable. Pursuing a master degree in the USA will help to enrich the empirical approach for research and problem solving skills which will provide a rigid foundation for my future career with minimum expenses. Furthermore, having American degrees which are highly recognizable in Nepal will open a lot of doors for research in Nepal.

**What did you do after garaduation ?**

After my graduation, I started working as a software Intern in TTI bagbazar. Then covid occurred I started volunteering for a government school where my role was to mentor secondary level students of my community. After things start getting normal I join Asterisk Digital as IT content writer parallely building my profile for my dream career in Data Science and Machine learning. Currently I am involved with GIIS as a data science Intern.

**Why this Course ?**

I chose this path to fulfill my ultimate dream of becoming a Machine learning researcher which required in-depth theoretical and practical knowledge with new & advanced technologies of CS. To recognize the pattern in data, and identify the best possible algorithm of machine learning for solving complex real world problems, I realized that I needed to pursue a Master's degree in Computer Science specialization in Informatics and Machine Learning.

*Unfortunately,*this  *specialization is not offered at masters level in Nepal*. I also chose this course as my primary focus on machine learning and conducting research in machine learning and exploring the unexplored portion of nepal.

**US custom and protection:**

#### **1. Which university and course? What is your purpose for visiting the US?**

I am going to pursue a ***thesis based******Master’s in Computer Science specialization in Informatics and Machine Learning from University of South Dakota with Graduate Assistantship****.*

**Which place are you going to?**

Vermillion is a city in and the [county seat](https://en.wikipedia.org/wiki/County_seat) of [Clay County](https://en.wikipedia.org/wiki/Clay_County,_South_Dakota).[[6]](https://en.wikipedia.org/wiki/Vermillion,_South_Dakota#cite_note-GR6-6) It is in the southeastern corner of [South Dakota](https://en.wikipedia.org/wiki/South_Dakota), [United States](https://en.wikipedia.org/wiki/United_States), and is the state's 12th-largest city. The city lies atop a bluff near the [Missouri River](https://en.wikipedia.org/wiki/Missouri_River).

South Dakota is bordered by **North Dakota in the north, Minnesota and Iowa in the east, Nebraska in the south, and Wyoming and Montana in the west**. The Missouri River runs north to south through the middle of the state.

In Vermillion, the summers are long and warm; the winters are freezing, snowy, and windy; and it is partly cloudy year round. Over the course of the year, the temperature typically varies from 13°F to 86°F and is rarely below -6°F or above 95°F.

Based on the [tourism score](https://weatherspark.com/y/9040/Average-Weather-in-Vermillion-South-Dakota-United-States-Year-Round#Sections-BestTime), the best time of year to visit Vermillion for warm-weather activities is from mid June to early September.

**Who is going to fund you?**

As I have been offered GTA with a $16000 fund. The rest of $8700 expenses will be funded by my parents during my stay in the US. My parents have savings of $30,000$ for my graduate studies.Both of my parents are government employees whose combined annual income is 18000$ .In addition, we also have a house in Simara which is on rent, 4 acres of land on lease and a farm in bara that sells fruit in markets making our combine cash inflow of 15000$.

#### **If you get a good job offer after graduation, what will you do?**

I have no plans of working in the United states. As I will use my F1 visa entirely for my masters degree and use it to contribute to research on climate change and the aviation sector of Nepal which is my primary focus after returning back to my country.

**How many universities have you applied to and what are they?**

Altogether I have applied for 3 universities and I have been. Lamar, South Dakota and New Haven.

#### **What did you do your bachelor’s degree from and when?**

I did my bachelor degree from the Institute of Engineering Nepal and I graduate on december 2019.

**Roles and responsibility at the current institute?**

My Roles and responsibilities at the current institute are to collect data , analyze data, find the observable pattern in the data, , Use visualization tools to visualize the information and help in making a dashboard to show the findings

#### **How did you shortlist those universities?**

I applied and got admitted to 5 universities. I shortlisted

the universities based on three factors:

a. How well do my research interests align with the current research that is being

conducted in the department?

b. What are the available funding opportunities?

I checked over 100 universities from U.S. News and University Rankings and shortlisted

the universities based on these factors.

**How your current job would help to decide on your future career?**

**Topic need to be prepared :**

Reinforcement learning :

Drug discovery :

KC’s papers: national library for medicine

1. [Truncated inception net: COVID-19 outbreak screening using chest X-rays](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=luPx18QAAAAJ&citation_for_view=luPx18QAAAAJ:qe6vwMD2xtsC)
2. [AI-driven tools for coronavirus outbreak: need of active learning and cross-population train/test models on multitudinal/multimodal data](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=luPx18QAAAAJ&citation_for_view=luPx18QAAAAJ:jFemdcug13IC)
3. [Agreeing to disagree: Active learning with noisy labels without crowdsourcing](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=luPx18QAAAAJ&citation_for_view=luPx18QAAAAJ:HtS1dXgVpQUC)
4. [Deep neural network to detect COVID-19: one architecture for both CT Scans and Chest X-rays](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=luPx18QAAAAJ&citation_for_view=luPx18QAAAAJ:3bvyWxjaHKcC)
5. [A comprehensive survey on on-line handwriting recognition technology and its real application to the Nepalese natural handwriting](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=luPx18QAAAAJ&citation_for_view=luPx18QAAAAJ:bnK-pcrLprsC)
6. [DevNet: an efficient CNN architecture for handwritten Devanagari character recognition](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=luPx18QAAAAJ&cstart=20&pagesize=80&citation_for_view=luPx18QAAAAJ:zwpXiJ37cpgC)
7. [Colorectal histology tumor detection using ensemble deep neural network](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=luPx18QAAAAJ&cstart=20&pagesize=80&citation_for_view=luPx18QAAAAJ:rTD5ala9j4wC)
8. [Bayesian networks for incomplete data analysis in form processing](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=luPx18QAAAAJ&cstart=100&pagesize=100&citation_for_view=luPx18QAAAAJ:tuHXwOkdijsC)

Machine learning :

**Extra**

**Machine Learning Definition:** *Machine Learning studies algorithms which can learn from data to gain knowledge from experience and to make decisions based on predictions.*

*ML focuses on tools and techniques for building models that can learn by themselves by using data from experience*

***Applications****: Data security, healthcare ,fraud detection,retail (recommendation system e-commerce sites),social media(auto tagging feature facebook)*

***(Extra)******Informatics Defn****: Informatics is the study of computational systems (information processing systems), especially those for**data storage and retrieval. It is basically the science of information.*

***Health informatics applies Data science to health service efficiences.***

***Applications****: telemedicine,electronic health records,health information system,elearning tools*

***Time series analysis****: It is a specific way of analyzing a sequence of data points collected over an interval of time. These four components are:*

* *Secular trend, which describe the movement along the term*
* *Seasonal variations, which represent seasonal changes*
* *Cyclical fluctuations, which correspond to periodical but not seasonal variations*
* *Irregular variations, which are other nonrandom sources of variations of series.*

***(Extra)*** *What specific courses are you seeking in your university?*

*I am looking forward to take courses like Database System, Machine Learning and Applied Statistics (1st semester courses),Information Storage & Retrieval, Data Analysis, Data Mining,OS.*

**(Extra) Data Scientist**

***Data science is the science of analyzing raw data using statistics and machine learning techniques with the purpose of drawing conclusions about that information.*** *A data scientist’s role combines computer science, statistics, and mathematics.*

*Few Important Roles and Responsibilities of a Data Scientist include:*

* *Analyze,process, and model large amounts of data to forecast trends and provide reports with recommendations for companies and other organizations*
* *Identifying data collection sources for business needs*
* *Collaborating with business, engineering, and product teams*
* *Processing, cleansing, and integrating data*

Computer Vision:

*Computer vision is an interdisciplinary scientific field that deals with how computers can gain high-level understanding from digital images or videos. From the perspective of engineering, it seeks to understand and automate tasks that the human visual system can do.*

Reinforcement learning:

Reinforcement learning is **a machine learning training method based on rewarding desired behaviors and/or punishing undesired ones**. In general, a reinforcement learning agent is able to perceive and interpret its environment, take actions and learn through trial and error

How do find Us ?

How to contribute to US ?

Add to cultural diversity in american society

1. I-20 clear

2. Pass

3. Transcript

Ds -160

Appointment letter on IV

Additional :