

# Mala Deep Upadhaya

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## Research and Career Goals

My research combines approaches from data visualization, human-computer interaction, machine learning, visual analytics, and data mining to solve social context problems and develop ways to make complex systems/ideas easier to use and understand for experts and non-experts. I am also interested in web design/development, user experience, and business plan/strategy development.

Besides my academic goal, my goal is to empower people through education and community activities.

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- [🌐 linked.com/in/maladeep](https://www.linkedin.com/in/maladeep)
- [📖 medium.com/@maladeep.upadhaya](https://medium.com/@maladeep.upadhaya)
- [🐙 github.com/maladeep](https://github.com/maladeep)
- [📊 Tableau Public/maladeep](https://public.tableau.com/#author/maladeep)

## Education

2016 - 2020	<b>Bsc. in Computer Science</b> <a href="#">Kathmandu University</a> , Kavre, Nepal
2014 - 2016	<b>Higher Secondary School</b> <a href="#">Prasadi Academy</a> , Lalitpur, Nepal
2011 - 2014	<b>School Leaving Certificate</b> <a href="#">Sainik Awasiya Mahavidhyalaya</a> , Bhaktapur, Nepal

## Research Experience

2019 - Present	<b>National Development and Research Institute (NDRI)</b> , Nepal Technical Research Assistant Supported in School For AI program in the formulation of protocol, system and support teachers from all around Nepal to adopt AI-based technology for the respective school.
2018	<b>Digital Learning Research Lab (DLR Lab)</b> , Kathmandu University Data Analysis and Visualization Worked under the supervision of Assistant Professor Sushil Shrestha and performed data analysis, visualization for Moodle data set using various Data mining concepts.
2018	<b>Dhulikhel Hospital</b> , Nepal Data Analyst Performed data analysis, visualization and modeling of the Skin Prick test in Allergic Rhinitis patients of the hospital under the supervision of Assistant Professor Sushil Shrestha and Dr. Monika Pokharel.
2018	<b>Youth For Nature (Present HCRI)</b> , Nepal Data Analyst Support in data analysis in understanding human-elephant conflicts in eastern Nepal

## Professional Experience

Aug 2020 - Dec 2020	<b>Grepsr</b> , Nepal Data Analysis and Visualization Supported in creating different visualization for the app, created an ad-hoc analysis of various Amazon's products using Tableau and QuickSight.
May 2020 - Aug 2020	<b>Reduct</b> , Nepal Intern, Data Science Group Supported in generating insights on employees' work performances, created dashboard and did language transcribing analysis.
Sep 2018 - Dec 2018	<b>Fatima Al-Fihri Open University</b> , Morocco Remote Intern, IT Office Supported in facilitating the IT infrastructure of the university system.

## Publications

"Express Your Feelings": An Interactive Application for Autistic Patients.  
Sharma P., **Upadhaya M.D.**, Twanabasu A., Barroso J., Khanal S.R., Paredes H.  
*Universal Access in Human-Computer Interaction. Multimodality and Assistive Environments.*, Lecture Notes in Computer Science, vol 11573. Springer, Cham.  
[📄 PDF](#)

Enhancing the Mobile Banking Interface of Nepal Investment Bank Limited with an Approach of Human Computer Interaction (Under Review)  
**Upadhaya M.D.**, Dahal N., Bjanju S., Dahal P., Shrestha S  
*Sixth International Conference on Information Technology for Development (ITAD) 7-9 Nov 2019*  
[🌐 Website](#)

Factors Affecting the Intention to Adopt Cloud Technology Among University Student of Nepal using Technology Acceptance Model (Under Review)  
**Upadhaya M.D.**, Dahal N., Bjanju S., Dahal P., Pokharel M.

## Poster Presentations

**Doctor Mobo: Personal Doctor on Hand**  
Pokharel B., Gupta M.K., Thapa S., Ranjitkar K., Shrestha A.K., Bhandari R., **Upadhaya M.D.**, Sharma G.  
*Department of Computer Science Kathmandu University 2019.*  
[📄 PDF](#)

**Understanding Human-Elephant Conflicts in Eastern Nepal**  
Poudyal B., **Upadhaya M.D.**, Khatiwada B., Upadhaya S.  
*Ruffard Nepal Conference, 29-30 Jan 2018.*

## Invited Presentations

**Experience of conference and research**  
Invited talk to 2015 Batch of HCI student group at Kathmandu University.

## Selected Media

**My Mom Is A Data Analyst**  
November 1, 2020, Helped in the translation of the project into the Nepali language.  
[🌐 Website](#)

## Presentations

**Above the Clouds: A Berkeley View of Cloud Computing**  
November 26, 2020. Cloud Computing group, Kathmandu University, Nepal. [📄 Presentation](#)

**Ways to evaluate a machine learning model's performance**  
February 26, 2020. Data mining group, Kathmandu University, Nepal. [📄 Presentation](#)

**How to choose Machine Learning algorithm.**  
February 23, 2020. Data mining group, Kathmandu University, Nepal. [📄 Presentation](#)

**All About Open Source | Software Freedom | Hacktoberfest**  
October 21, 2019. Shree Saraswati Secondary School, Dolpa, Nepal. [📄 Presentation](#)

**Toulmin's Model**  
September 4, 2014. Kathmandu University, Nepal. [📄 Presentation](#)

## Honors & Awards

2020	<b>S-H-O-W Conference Diversity Scholarship</b> , Recipient
2020	<b>Datafest Tbilisi Diversity Scholarship</b> , Recipient
2019	<b>Web Weekend KTM Conference Diversity Scholarship</b> , Recipient
2019	<b>Intel® Edge AI Scholarship Foundation Course Nanodegree</b> , Recipient
2019	<b>Bertelsmann Tech Scholarship Challenge Course</b> , Recipient
2019	<b>Everest Hackathon, Genese Solution</b> , Most Cost Optimized Challenge Winner
2019	<b>Symposium on Artificial Intelligent for Sustainable Development Goal (SDG)</b> , Participant
2018	<b>Hult Prize OnCampus at Kathmandu University</b> , Second Runner Up
2018	<b>Massachusetts Institute of Technology, Global Startup Lab (MIT GSL)</b> , Second Runner Up
2018-2020	<b>Wells Mountain Initiative Scholarship</b> , Recipient
2015	<b>Prasadi Academy Higher Secondary School</b> , Most Impressive Student
2008-2014	<b>Sainik Awasiya Mahavidhyalaya Appreciation for Leadership</b> , Recipient

## Sample Projects

### Machine Learning/ AI

2020 **Spam, Ham Detector**  
Designed and developed web-based SMS spam, ham(not spam) detector called SMS: Spam | Ham Detector using: Python, Algorithm: Naive Bayes, Flask, HTML, CSS Bootstrap.  
[📄 Medium Blog](#) [🐙 GitHub](#)

2018 **Disease Name Extractor**  
Build a machine language project called Hamro Swastha that allows users to extract disease names from doctor's prescription using Python, Keras, Flask, HTML, Bootstrap.

2019 **Women's Health Focused Chatbot**  
Designed and built a Chatbot called MeriSathi, which assists women from the rural part of Nepal to solve their health issues using NPL, Python(Flask) Ngrok.

### Mobile App

2019 **Human Health App**  
Designed and build an android based app for Nirogi Inc USA, called Dr.Mobo, that focuses on providing relevant information about different diseases and recommendation medication using MySQL, Android SDK.  
[📄 PDF](#)

2018 **Pet Health App**  
Designed and developed an android app called Dr.Panda, for pet lovers which provides a convenient way to care pets, provide First-aid information's for emergencies, help track the medical and dietary data of pets and provide geolocation of nearby veterinaries/hospital using Java, Android Studio and Google Maps.  
[🐙 GitHub](#)

### Web

2020 **e-commerce**  
Designed and developed website for Musumusu Cashmere that sells knit and woven using top-quality cashmere obtained from the soft undercoat of cashmere goats using Shopify.  
[🌐 Website](#)

2019 **Non-Profit Organization**  
Designed website for Himalayan Conservation & Research Institute, an independent, not-for-profit organization established by a team of young socio-ecological researchers and conservationists from Nepal to promote science-based conservation of natural resources using HTML, Bootstrap CSS, JS.  
[🌐 Website](#)

2019 **Women Education/Health Portal**  
**Everest Hackathon, Genese Solution, Most Cost Optimized Challenge Winner 🏆**  
Designed and build a web portal called HamMiMim, a curated challenge that serves as a focal point for health services, advocating the issues, and connecting to health experts even at low internet bandwidth areas using:Vue.js,node.js, AWS cloud services.  
[🐙 GitHub](#)

2018 **Opus**  
Massachusetts Institute of Technology, **Global Startup Lab (MIT GSL)**, **Second Runner Up 🏆**  
Designed a website for own startup called Opus that connects the artist with art lover and allows an artist to sell and share their works and recognize them as a brand using: MySQL, PHP, HTML, CSS, Bootstrap, JQuery.

## Technical Skills

Programing Languages	Python (Intermediate), Javascript (Intermediate), PHP (Intermediate), HTML (Intermediate), C (Basic), C++ (Basic)
Database	MySQL, Firebase
Documentation	LaTeX
Data Science Skills	Jupyter, Tableau, WEKA, Excel, QuickSight, Google Dashboard
Other Skills	UI/UX, Design Thinking, Event Management, Business Plan, Pitch Deck

## Community Services & Outreach

2019	<b>Facilitator/Founder</b> <a href="#">Gyaan: Giving Back to Society</a>
2019	<b>Coordinator</b> <a href="#">Innovation and Entrepreneur Community, Kathmandu University</a>
2018	<b>Executive Member</b> <a href="#">Kathmandu University Computer Club</a>
2018	<b>Founder</b> Saraswati Computer Club, Dolpa
2015-2018	<b>Volunteer</b> <a href="#">Youth for Nature</a> <a href="#">SeedTree Inc</a>
2014-2018	<b>Volunteer</b> Educational Social and Environmental Conservation Team Nepal
2013-2014	<b>Secretary</b> <a href="#">Sainik Junior Red Cross Circle</a>

## Workshops

### Facilitator

2019 **Startup Workshop @ Kathmandu University**  
Dean of School of Engineering  
Advisor at Digital Learning Research Lab  
Department of Computer Science and Engineering  
Kathmandu University, Nepal  
977-11-415100 (Ext.4106)  
sushil@ku.edu.np

2018 **Learn Computer**  
Saraswati Computer Club, Dolpa

### Participant

2020 **Three Month Research Writing Training**  
South Asian Writing Group 2020

2019 **Impact Week Nepal**  
Lufthansa Group Airlines

2018 **MIT Global Startup Labs**  
MIT International Science and Technology Initiatives

## Languages

**Nepali**  
Mother Tongue

**English**  
Professional Working

**Hindi**  
Limited Working

**Spanish**  
Basic

## References

**Sushil Shrestha**  
Assistant Professor  
Lead Researcher at Digital Learning Research Lab  
Department of Computer Science and Engineering  
School of Engineering  
Kathmandu University, Nepal  
977-11-415100 (Ext.4106)  
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**Prof. Dr. Manish Pokharel**  
Dean of School of Engineering  
Advisor at Digital Learning Research Lab  
Department of Computer Science and Engineering  
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