

EDUCATION

The University of Toledo, Master of Science in Computer Science **GPA: 3.96** **Aug 2021 – Aug 2023 (Expected)**
Tribhuvan University, Bachelor in Computer Engineering **Sep 2013 – Oct 2017**

PUBLICATION AND PRESENTATION

- [Automated Multimodal Performance Evaluation in Simulation-based Medical Education using Natural Language Processing](#) published and presented a poster at **ACM/IEEE 14th International conference on Cyber-Physical Systems**, May 9-12 | San Antonio, Texas, 2023
- Co-authored a scientific abstract [Role of Smart Wearable Devices in Postoperative Care of Cardiac Surgery Patients](#), presented at the **59th Annual Meeting of The Society of Thoracic Surgeons**, Jan 21-23 | San Diego, California, 2023

TECHNICAL SKILLS

Programming/Web Development: Python, JS, React, Node, MYSQL, PHP, Git, C, C++, HTML, CSS, WordPress, VHDL
Natural Language Processing/Computer Vision: CNN, GAN, U-NET, OpenCV, LSTM, Transformer, BERT

WORK EXPERIENCE

Research/Teaching Assistant and Senior Year Project Advisor - The University of Toledo, Toledo, OH **Jan 2022 - May 2023**

- Collaborated with **Cardiothoracic researchers** from University of Toledo medical center for analyzing heart surgery data of **20 patients**.
 - Employed ML model to predict whether the patient needs intervention from a doctor based on the patient's latest data.
 - Performed detailed analysis of vital characteristics of the patient such as O2 level, Heart Rate Variation, BP, Fat and Bone mass.
- Oversaw the development of more than **30 capstone projects** for undergraduate students, providing supervision and guidance. Additionally, administered **Energy Conversion** and **Digital Logic Design** for over **60** undergraduate students.

Conversation Bot Engineer Intern - Quantiphi Inc, Marlborough, MA **May 2023 - August 2023**

- Leveraged Dialogflow CX to engineer **Fargo**, a Virtual Agent designed to enhance the banking experience for Wells Fargo's extensive customer base of over 70 million individuals.
- Enhanced **Fargo** by training it on hundreds of unique user interactions, utilizing natural language processing. This required the creation of a wide-ranging training dataset that responded to a diverse array of customer requests and inquiries.
- Designed features allowing users to seamlessly navigate specific transactions by date, amount, or type.
- Integrated functionality to efficiently manage debit card settings, review credit limits, and engage with Wells Fargo for extensive banking inquiries and assistance.
- Trained Wells Fargo employees on Dialogflow CX best practices resulting in a 10/10 appraisal with potential for further engagement.
- Undertook the responsibility of reviewing and validating code written by Wells Fargo developers.
- Worked effectively with multiple global SCRUM teams across different time zones, successfully utilizing Agile methodologies to expedite project execution and improve productivity.
- Collaborated with NLP linguists, UAT testers, Frontend developers, Product Manager and Product Owner, and led the team in bi-weekly product update demo meetings.

Software Engineer – FOCUSONE Nepal Pvt.Ltd, Kathmandu, Nepal **July 2018 – May 2020**

Tools: PHP, JavaScript, MySQL, Python, HTML5/CSS, Dialogflow API

- Oversaw the development of Vehicle Tax Calculator "VTAX" for Department of Transport Management (DOTM), Nepal.
- Developed Interactive Chatbot using Dialogflow API and designed dynamic websites using processwire CMS and PHP.
- Prepared necessary documents such as SRS, SOW, and DFDs, to keep track of the Software development life cycle (SDLC).
- Gained hands-on-experience with agile software development methodologies like scrum and used stage-illustration software - JIRA.

ACADEMIC PROJECTS

Automated Multimodal Performance Evaluation in Simulation-based Medical Education using NLP | MS THESIS

- Designed an integrative solution for simulation-based medical education performance assessment.
- Utilized Natural Language Processing(NLP) coupled with physiological data analysis for a comprehensive multimodal evaluation of learner performance at instructor, learner and environment level.

Sentiment Analyzer | Python, Tensorflow, Keras, LSTM, Flask, Word2Vec, NLP

[See Project](#)

Sentiment analysis of newspapers articles.

- Used Stacked Bidirectional Long short-term memory(BiLSTM) model to build News Sentiment Analyzer.
- Deployed a Flask app to display the live sentiment of News Published in English Newspapers of Nepal.

ColorGAN | Python, Tensorflow, Keras, CNN, GAN, U-Net

[See Project](#)

Deep neural network model for colorizing grayscale images.

- Colorizing Grayscale Photos using Conditional Generative Adversarial Networks(cGAN) model.