

Supriya Khadka

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SUMMARY

Conversational AI Engineer at Diyo AI, leveraging technical expertise and problem-solving skills to develop innovative conversational systems using Natural Language Processing.

WORK EXPERIENCE

Conversational AI Engineer, Diyo AI

May 2023 - present

- Building multilingual chatbots using the Rasa framework
- Conducting research on Large Language Models to develop and improve conversational models
- Analyzing user feedback and data to refine and optimize chatbot performance iteratively

Computer Vision Research Engineer, Rara Labs (Contract)

Jan 2023 - March 2023

- Worked on the discovery phase of implementing AI for NWash, a project initiated by The Ministry of Water Supply in collaboration with the British Embassy, Frontier Tech and Rara Labs
- Successfully implemented object detection and recognition algorithms on the dataset collected through the NWash Project, seamlessly integrating them with a web application
- Conducted extensive research on computer vision algorithms to identify the most suitable solutions based on the dataset requirements

NLP Research Intern, NAAMII

Oct 2022 - April 2023

- Researched the work done in Nepali NLP (Text Summarization, Nepali Transliteration, Nepali Text-to-Speech) under the supervision of Dr. Bishesh Khanal
- Curated Nepali NLP datasets with the study of their features and limitations (Sentiment Analysis, Nepali Text-to-Speech, Machine Translation)

EDUCATION

Bachelor in Computer Engineering

November 2018 - April 2023

Pulchowk Campus, Institute of Engineering, Tribhuvan University, Nepal

(Agg. 85.69%)

- **Research and Development Intern at Center for Applied Research and Development(CARD)** under the supervision of Dr. Basanta Joshi
- Recipient of the **Ncell Excellence Scholarship** for three consecutive years (2020-2022)
- Managing Editor of The Zerone 2023, the official department magazine

Higher Secondary Education

June 2016 - June 2018

St.Xavier's College, Maitighar, Nepal

(GPA 3.72/4.0)

- Recipient of the Rajan Karki Memorial Outstanding Student Award, 2018
- Recipient of the end-of-session scholarship as the top-performing individual
- President of the St. Xavier's Literary Club

SELECTED PROJECTS

Shruti - A Nepali Book Reader

[Link to Code](#)

- A Nepali Text-to-Speech System for audiobook applications
- Built using Tacotron-2 architecture (for spectrogram generation) and Hifi-GAN and WaveGlow (for vocoder), all of which implemented in PyTorch

D-Shelf

[Link to Code](#)

- A decentralized platform to mint and buy books in the form of NFTs built using solidity, ethers.js, Hardhat, IPFS and React.
- Built the entire frontend using React and Material UI

Saral Kanoon

[Link to Code](#)

- Web app for reading simplified safety laws
- Used Express in the backend, bootstrap in the frontend, and MongoDB as the database. Solved User Authentication issues using Passport.js

Arthur - The Gladiator

[Link to Code](#)

- A game where a knight saves the princesses going through various obstacles
- Built the third level of the game using Quick Sort and Merge Sort Algorithms in C++ with SFML as Graphics Library

PUBLICATION

Khadka et al.: Nepali Text-to-Speech Synthesis using Tacotron2 for Melspectrogram Generation

khadka2023tts

Supriya Khadka, Ranju G.C., Prabin Paudel, Rahul Shah, and Basanta Joshi. “Nepali Text-to-Speech Synthesis using Tacotron2 for Melspectrogram Generation”. In: *SIGUL 2023, 2nd Annual Meeting of the Special Interest Group on Under-resourced Languages: a Satellite Workshop of Interspeech 2023*. 2023.

Paudel et al.: Decentralized Book Publishing Platform using Blockchain and IPFS: An NFT-based Solution to Royalty Theft

paudel2022decentralized

Prabin Paudel, Ranju G.C., Rahul Shah, and Supriya Khadka. “Decentralized Book Publishing Platform using Blockchain and IPFS: An NFT-based Solution to Royalty Theft”. In: *International Conference on Engineering & Technology*. Vol. 3. 2022.

TECHNICAL SKILLS

- **Python** including libraries useful for machine learning like **Numpy**, **Pandas**, **Scikit-Learn**, **Pytorch**
- Front end programming using **JavaScript** and its frameworks like **React**
- Server side coding using **Node.js** frameworks like **Express** and Python frameworks like **Django**
- Experience with various SQL databases like **PostgreSQL** and **mySQL** and NoSQL databases like **MongoDB** and **Firebase**
- Version control systems like **Git**
- Basic knowledge **Blender** for 3D modelling and **After Effects** for motion graphics.

VOLUNTEER INVOLVEMENTS

Women Leaders in Technology	Technical Facilitator	(Sept 2021 - Present)
GitHub Field Day Nepal	Planning Coordinator	(April 2022 - Oct 2022)
Hult Prize at IOE, Pulchowk Campus	Event Manager	(Sept 2021 - Jul 2022)
Pulchowk Girls	Technical Manager	(Sept 2020 - Jun 2022)
Nepal Online School	Contributor	(Jun 2020 - Sept 2020)
The Zerone 2020	Associate Editor	(Nov 2019 - Apr 2020)

REFERENCES

Will be provided if necessary