

Supriya Khadka

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Summary

A curious and detail-oriented individual interested in machine learning and natural language processing, with aspirations for **NLP research**, particularly at the intersection of **Human-AI interaction** and **NLP in social and medical contexts**.

Education

Master in Science by Research, AI Sept 2024 - Oct 2025 (Expected)
Coventry University, United Kingdom
Supported by British Council Women in STEM Scholarship

Bachelors in Computer Engineering Nov 2018 - Apr 2023
Pulchowk Campus, Tribhuvan University, Nepal (Agg. 85.60%)

Research Experience

Postgraduate Researcher, Coventry University September 2024 - now
Project Title: Lowering the Cost of Healthcare by Clinical Coding with LLMs
Supervisors: Dr. Xiaorui Jiang, Prof. Vasile Palade

- Exploring the viability of LLMs in clinical coding for evidence extraction, code prediction, and code verification.
- Conducting quality and error analysis on existing clinical coding datasets using LLMs, in collaboration with professional clinical coders.
- Evaluating the performance and cost-effectiveness of different few-shot learning strategies for adapting PLMs and LLMs to the clinical coding tasks.

Undergraduate Research Assistant, CARD Jul 2022 - May 2023
Supervisor: Dr. Basanta Joshi

- Conducted research on Nepali Text-to-Speech synthesis at Center for Applied Research and Development (CARD), Institute of Engineering, Pulchowk Campus.
- Prepared a comprehensive Text-to-Speech dataset (released publicly on [OpenSLR](#)), experimented with multiple models, and integrated the best result into a mobile application.

NLP Research Intern, NAAMII Oct 2022 - Apr 2023
Supervisor: Dr. Bishesh Khanal

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

Teaching Experience

Technical Lead and Facilitator, Women Leaders in Technology

Sept 2020 - Nov 2023

- Served as a Technical Facilitator for three consecutive batches of a fellowship program aimed at empowering women leaders in technology, after graduating as a fellow.
- Instructed **over 50 fellows** in essential technical subjects, including Git, Basic JavaScript concepts, Asynchronous JavaScript concepts, Express, and MongoDB, during the fellowship bootcamp.
- Promoted to the Technical Lead in the latest batch, overseeing all technical sessions and projects, and teaching approximately half of the classes throughout the duration of the fellowship.

Industry Experience

Conversational AI Engineer, Diyo.AI

May 2023 - Aug 2024

Supervisor: *Dr. Bishesh Khanal*

- Built multilingual chatbots tailored for domains such as sexual and maternal reproductive health, safe abortion, e-governance, and sales.
- Researched and implemented LLMs like *GPT3.5*, *Llama2*, *BLOOM* and *Okapi* to develop and improve conversational models and their language understanding capability for Nepali.
- Curated, refined, and enhanced NLP datasets for low-resource languages to develop language technologies for Nepali and other languages of Nepal, as a continuation of my internship at NAAMII.
- Successfully pitched Diyo.AI at **ICT Startup Awards 2023**, securing a spot in the **top 5 finalists**.

Computer Vision Engineer, Rara Labs (Contract)

Jan 2023 - Mar 2023

- Worked on the discovery phase of implementing *AI for NWash*, a project initiated by The Ministry of Water Supply, Nepal 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.

Publications & Manuscripts

Peer-Reviewed Publications

Khadka, Supriya, and Bijayan Bhattarai. “Gender Bias in Nepali-English Machine Translation: A Comparison of LLMs and Existing MT Systems”. *Proceedings of the 6th Workshop on Gender Bias in Natural Language Processing (GeBNLP)*. Association for Computational Linguistics, Aug. 2025, pp. 75–82, aclanthology.org/2025.gebnlp-1.6/.

Khadka, Supriya, Ranju G.C., Prabin Paudel, Rahul Shah, and Basanta Joshi. “Nepali Text-to-Speech Synthesis using Tacotron2 for Melspectrogram Generation”. *Proc. 2nd Annual Meeting of the ELRA/ISCA SIG on Under-resourced Languages (SIGUL 2023)*. 2023, pp. 73–77, <https://doi.org/10.21437/SIGUL.2023-16>.

Manuscripts Under Review

Anonymous. “Title withheld due to double-blind peer review”. Under review at *JCDL 2025* (double-blind submission), 2025.

Sharma, Medha, **Supriya Khadka**, et al. “Evaluating Large Language Models’ Responses to Sexual, Maternal and Reproductive Health Queries in Nepali”. Manuscript under review at *Scientific Reports*. Medha Sharma and Supriya Khadka contributed equally., 2025.

Non-archival Work

Sharma, Medha, **Supriya Khadka**, et al. “Can Chatbots Bridge SRH Information Gaps? A Community-Level Evaluation of ChatGPT in Nepal”. *International Conference on Family Planning (ICFP)*. 2025.

Paudel, Prabin, **Supriya Khadka**, Ranju G.C., and Rahul Shah. Optimizing Nepali PDF Extraction: A Comparative Study of Parser and OCR Technologies. *arXiv preprint arXiv:2407.04577*, 2024.

Paudel, Prabin, Ranju G.C., Rahul Shah, and **Supriya Khadka**. D-Shelf: A Decentralized Book Publishing Platform. *7th International Workshop on Effective Engineering Education (IWEEE)*, 2022.

Honors

Scholarships and Fellowships

- British Council Women in STEM Scholarship, 2024
- Ncell Excellence Scholarship - Yearwise Top Student, 2019 - 2023 [Press Releases [1](#), [2](#), [3](#), [4](#)]
- Fusemachines AI Fellowship, 2022
- 3rd Annual Nepal AI School - Full Scholarship, 2021
- Grace Hopper Conference Scholarship, 2021
- Women Leaders in Technology Fellowship, 2020

Awards

- Best Poster, 3rd Annual CSMM Conference, 2025
- GritFeat AI Health Hackathon, Runner Up, 2023
- Hack-A-Week Winner (Category - FinTech), 2022
- BPKHIS and GDHUB Hackathon for Healthcare, Runner Up 2022
- OpenIMIS Datathon, 2nd Runner Up, 2022

Service

Reviewer

- 3rd Annual CSMM Conference, 2025
- 7th International Workshop on Effective Engineering Education (IWEEE), 2022
- 6th International Workshop on Effective Engineering Education (IWEEE), 2021

Volunteering

- 63rd Annual Meeting of the Association for Computational Linguistics (ACL 2025)

Research Posters and Presentations

- From Evidence to Codes: Making Automated Clinical Coding Explainable, **Poster**, *3rd Annual CSMM Conference, 2025*
- From Evidence to Codes: A Two-Stage Approach for Explainable Clinical Coding, **Oral**, *Researcher Capability and Development Conference (RCAD), 2025*

- Navigating Gender Biases in AI: Is it us or is it the data? A perspective on Nepal and beyond, **Oral**, *Women in Data Conference 2024*

- Shruti - Nepali Text-to-Speech Synthesis using Tacotron2 for Mel-Spectrogram Generation, **Poster and Oral**, *Young Women Leading the Way Showcase, 2023*

Student Activities

- Planning Coordinator, GitHub Field Day Nepal, 2023-24
- Managing Editor, The Zerone Magazine, 2022-23
- Event Manager, Hult Prize at IOE, Pulchowk Campus, 2021
- Technical Manager, Pulchowk Girls, 2020-22