

Supriya Khadka

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Summary

Researcher in **machine learning** and **NLP**, with interests in **Human-AI interaction**, **User-centered Privacy** and **NLP applications in social and health domains**.

Education

Master in Science by Research, AI <i>Coventry University, United Kingdom</i> <i>Supported by British Council Women in STEM Scholarship</i>	Sept 2024 - Sept 2025
Bachelors in Computer Engineering <i>Pulchowk Campus, Tribhuvan University, Nepal</i>	Nov 2018 - Apr 2023 (Agg. 85.60%)

Research Experience

Visiting Researcher, CHAI Lab <i>Research Area: Empathy in Conversational Agents</i> <i>Advisor: Dr. Smit Desai</i>	Oct 2025 - now
Postgraduate Researcher, Coventry University <i>Project Title: Lowering the Cost of Healthcare by Clinical Coding with LLMs</i> <i>Advisors: Dr. Xiaorui Jiang, Prof. Vasile Palade</i>	Sept 2024 - Sept 2025
<ul style="list-style-type: none">– Investigating how empathy is modelled, projected, elicited, and measured in user-focused empirical studies of text- and voice-based conversational agents.	

Undergraduate NLP Research (CARD & NAAMII) <i>Advisors: Dr. Basanta Joshi (CARD), Dr. Bishesh Khanal (NAAMII)</i>	July 2022 - May 2023
<ul style="list-style-type: none">– Developed a Nepali Text-to-Speech (TTS) model, leading to a publication and presentation at SIGUL; work included integrating the model into a mobile application at CARD.– Prepared and publicly released a comprehensive Nepali TTS dataset (OpenSLR) to support the research.– Analysed and curated Nepali datasets for Sentiment Analysis, TTS, and Machine Translation at NAAMII, documenting their features and limitations.	

Industry Experience

Conversational AI Engineer, Diyo.AI

May 2023 - Aug 2024

Advisor: [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.

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, integrating them with a web application.

Publications & Manuscripts

Peer-Reviewed Publications

Khadka, Supriya, and Bijayan Bhattacharai. “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, Xiaorui Jiang, and Vasile Palade. “Automated clinical coding with multiclass ICD prediction”. *Proceedings of the IEEE International Conference on Machine Learning and Applications (ICMLA 2025)*. In Press. 2025.

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

Khadka, Supriya, Xiaorui Jiang, and Vasile Palade. “Data Quality in Clinical Coding: A Critical Analysis and Preliminary Study”. *medRxiv*, 2025, pp. 2025–08. <https://doi.org/10.1101/2025.08.24.25334321>.

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.

Teaching Experience

Technical Lead and Facilitator, Women Leaders in Technology Sept 2020 - Aug 2024

- Served as a Technical Facilitator for four consecutive batches of a fellowship program aimed at empowering women leaders in technology, after graduating as a fellow.
- Instructed **over 60 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, responsible for developing the curriculum, training junior facilitators, overseeing all technical sessions and projects, and teaching approximately half of the classes throughout the fellowship.

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 [Press Release]*
- 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