

EDUCATION	Advanced College of Engineering and Management	Kathmandu, Nepal
	Institute of Engineering (IOE), Tribhuvan University <i>B.E. in Computer Engineering 77.22/100 (Rank: 3 / 96) (First Div.)</i> <ul style="list-style-type: none"> • Advisor: Prof. Dr. Subarna Shakya • Research area: Recommender System and Machine Learning 	2018 - 2023
PUBLICATIONS	<ol style="list-style-type: none"> 1. Recchia G, Mangat C, Nyachhyon J, Sharma M, Canavan C, Epstein-Gross D, Abdulbari M. Confirmation bias: A challenge for scalable oversight. AAAI-AIA, 2026. [DOI] 2. Nyachhyon J, Sharma M, Thapa P, Bal BK. Consolidating and Developing Benchmarking Datasets for the Nepali Natural Language Understanding Tasks. AACL-IJCNLP, 2025. [DOI] 3. Thapa P, Nyachhyon J, Sharma M, Bal BK. Development of Pre-Trained Transformer-based Models for the Nepali Language. (CHiPSAL) COLING, 2025. (<i>Joint First Author</i>) [DOI] 4. Thapa P, Sharma M, Nyachhyon J, Pandeya YR. Local Herb Identification Using Transfer Learning: A CNN-Powered Mobile Application for Nepalese Flora. Arxiv Preprint, 2025. [DOI] 5. Banjara B, Shrestha J, Nyachhyon J, Timilsina R, Shakya S. Interactive Guide Assignment System with Destination Recommendation and Built-in Chatbox. Journal of Trends in Computer Science and Smart Technology, 2023. [DOI] 	
RESEARCH EXPERIENCE	Manifold Research Group	USA (Remote)
	<i>Open Science Research Fellow</i> <ul style="list-style-type: none"> • Software Control Agents: Evaluate Mind2Web datasets and benchmarked models such as UITars and Qwen2.5-V. • Analysis: Analyzed model behavior on spatial reasoning and action grounding in complex environments. 	2025.10 - Present
	Information and Language Processing Research Lab (ILPRL)	Kavre, Nepal
	<i>Research Assistant, Supervisor: Dr. Bal Krishna Bal</i> <ul style="list-style-type: none"> • Nepali Corpus for Foundation Models: Assembled and processed 27.5GB Nepali text corpus, contributing to low-resource language data and addressing data scarcity. • Pre-Training: Pretrained BERT, RoBERTa, and GPT-2 with instruction tuning, achieving SOTA with 95.60 on Nep-gLUE benchmark. • Benchmarking: Led design and release of NLUE benchmark with 12 Nepali NLU tasks, setting a new standard for evaluation. 	2024.07 - Present
	Institute for Research and Innovation in Intelligent Systems (IRIIS)	Nepal
	<i>Co-founder & Researcher</i> <ul style="list-style-type: none"> • Multilingual Reasoning Models: Developing planning & reasoning datasets to understand model capabilities in multi-agent environments. • Education: Create visual educational materials on probability theory and CUDA programming, inspired by 3Blue1Brown. 	2024.12 - Present
	Modulo Research Ltd.	Cambridge, UK (Remote)
	<i>Research Intern, Supervisor: Dr. Gabriel Recchia</i> <ul style="list-style-type: none"> • Automated Analysis: Automate analysis of 20-minute screen recordings, refining scene change detection with 80% precision via URL change tracking and LLM-based event and detail extraction of video frames. • LLM Alignment Evaluation: Conducted scalable oversight experiments by comparing LLM outputs with human annotations to assess and improve intent alignment. 	2024.06 - 2024.08

PROFESSIONAL EXPERIENCE	Insyde AI <i>AI Developer</i>	Maryland, USA (Remote) 2025.01 - Present
	<ul style="list-style-type: none"> • AI Agent: Developed and deployed AI agents to automate financial calculations, multi-scenario evaluation, and user-facing email generation for loan officers. • Automation: Reduced per-customer processing time by over 90%, enabling officers to handle 10× more requests with improved consistency and response quality. 	
	Virtly IT & Business Solutions Sarl (ICEBRKR) <i>ML Engineer</i>	Geneva, Switzerland (Remote) 2024.03 - 2024.09
	<ul style="list-style-type: none"> • Finetuning: Finetuned BART, T5, Pegasus for summarization (ROUGE-L >50, implying very high overlap with human summaries); Phi-3 for task prioritization system. • Scheduling Algorithm: Built an algorithm to resolve online meeting scheduling conflicts by proposing optimal time slots. 	
	LogicTronix <i>ML/CV Engineer</i>	Lalitpur, Nepal 2023.06 - 2024.03
	<ul style="list-style-type: none"> • 3D Object Detection: Integrated and optimized SFA3D into ADAS stack, achieving real-time 3D object detection at 20 FPS on embedded platforms. • Object Detection & Tracking: Implemented YOLO, CenterNet, and Deep SORT algorithms for real-time object detection and tracking at over 50 FPS. • Model Quantization: Reduced model size by over 60% through quantization for Xilinx FPGA deployment, improving edge inference efficiency. 	
TALKS & PRE- SENTATIONS	<ul style="list-style-type: none"> • <i>Development of Pre-Trained Transformer-based Models for the Nepali Language, COLING 2025</i>, Oral Presentation. • <i>Consolidating and Developing Benchmarking Datasets for the Nepali Natural Language Understanding Tasks, AACL-IJCNLP 2025</i>, Conference Presentation. 	
VOLUNTEER	PyTorch Tester & Mentor <i>DeepLearning.AI</i>	Remote 2025.08 - Present
	<ul style="list-style-type: none"> • Bug Hunting: Test courses that includes lectures, quizzes, labs and assignments for general and code specific bugs, and report them. • Mentorship: Guide learners on PyTorch and deep learning, resolving quiz conflicts, clarifying doubts, and supporting forum discussions in DeepLearning.AI courses. 	
	Instructor & Event Organizer <i>Advanced College of Engineering and Management</i>	Kathmandu, Nepal 2022.03 - 2023.01
	<ul style="list-style-type: none"> • Workshop: Led hands-on workshops mentoring 100+ peers and juniors in programming and ML fundamentals. • Curriculum Development: Developed a structured curriculum covering Python (basic to advanced) and introductory Machine Learning. • Techfest: Organized international zonal qualification from Nepal for IITB Techfest. 	
REFERENCES	Prof. Dr. Bal Krishna Bal	
	Associate Dean, Kathmandu University Professor, Department of Computer Science and Engineering, School of Engineering <i>bal@ku.edu.np</i>	
	Dr. Gabriel Recchia Director, Modulo Research Ltd <i>gabe@moduloresearch.com</i>	
	Prof. Dr. Subarna Shakya Director, Information Technology Innovation Center, Tribhuvan University Professor, Department of Electronics and Computer Engineering, Institute of Engineering <i>drss@ioe.edu.np</i>	