Jinu Nyachhyon

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Education

Advanced College of Engineering and Management — Kathmandu, Nepal

Institute of Engineering (IOE), Tribhuvan University

B.E. in Computer Engineering 77.22/100 (Rank: 3 / 96) (First Div.) — 2018 - 2023

- **Advisor**: Prof. Dr. Subarna Shakya
- **Research area**: Recommender System and Machine Learning

Publications

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. ***(Joint First Author)*** [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

Manifold Research Group — USA (Remote)

Open Science Research Fellow — 2025.10 - Present

- **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.

Information and Language Processing Research Lab (ILPRL) — Kavre, Nepal

Research Assistant, Supervisor: Dr. Bal Krishna Bal — 2024.07 - Present

- **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.

Institute for Research and Innovation in Intelligent Systems (IRIIS) — Nepal

Co-founder & Researcher — 2024.12 - Present

- **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.

Modulo Research Ltd. — Cambridge, UK (Remote)

Research Intern, Supervisor: Dr. Gabriel Recchia — 2024.06 - 2024.08

- **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.

Industry

Insyde AI Maryland, USA (Remote)
AI Developer 2025.01 - Present

- **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) Geneva, Switzerland (Remote)
ML Engineer 2024.03 - 2024.09

- **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 Lalitpur, Nepal
ML/CV Engineer 2023.06 - 2024.03

- **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.

Volunteer

PyTorch Tester & Mentor Remote
DeepLearning.AI 2025.08 - Present

- **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 Kathmandu, Nepal
Advanced College of Engineering and Management 2022.03 - 2023.01

- **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:** Oragnized 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
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Dr. Gabriel Recchia
Director, Modulo Research Ltd
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Prof. Dr. Subarna Shakya
Director, Information Technology Innovation Center, Tribhuvan University
Professor, Department of Electronics and Computer Engineering, Institute of Engineering
drss@ioe.edu.np