Bishal Lakha

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EDUCATION

Boise State University May, 2025 (Expected)
PhD in Computer Science *Boise,Idaho*

Boise State University May, 2023
Master in Computer Science *Boise, Idaho*

Institute of Engineering, Tribhuvan University December, 2016
BE in Electronics and Communication Engineering *Lalitpur, Nepal*

EXPERIENCE

Computer Science Department, Boise State Univeristy August 2021 – Present
Graduate Research Assistant *Boise, Idaho*
- Currently developing temporal GNN based algorithm to predict nation initiated cyber attacks using news-based historical international relations data.
- Used unsupervised GNNs and Transformer models to build novel anomaly detection algorithm for provenance data.
- Coordinated with GAs to move Security Onion to cloud using AWS services like EC2, S3, and VPC.

Rarecarat, Inc May 2020 – July 2021
Remote Machine Learning Consultant *New York, USA*
- Delivered 4 regression models used to generate price score for diamonds in the Rarecarat platform.
- Assisted DevOps team to deploy and monitor the models using Flask and Docker.

Newrun Technology June 2019 – August 2021
Machine Learning Engineer, Co-founder *Bhaktapur, Nepal*
- Lead computer vision team to develop sport analysis software called NeuroPadel for a company based in Spain.
- Guided a team to develop automatic speaker recognition and speech transcription app.
- Handled company's day-to-day operations and business meetings.

Paaila Technology April 2017 – May 2019
Machine Learning Engineer *Lalitpur, Nepal*
- Utilized SNIPS to create chatbot system integrated in robots and messenger applications.
- Worked with face recognition and tracking algorithms and trained face spoof detection model.
- Coordinated in collecting and processing data for Nepali Speech Recognition Project. Trained DeepSpeech algorithm using the data.

Upwork March 2017 – July 2021
Machine Learning Engineer *Remote*
- Top Rated Freelancer. Completed more than 40 projects with an average rating of 4.95/5
- Collaborated with teams (Recruit.net, Inavan India Technology,Innsightful and other) from across the globe to deliver different computer vision, NLP and time series prediction projects.

TECHNICAL SKILLS

Languages: Python, SQL, C, Java, C++, R
ML Skills: Graph Neural Network, Deep Learning, Computer Vision, NLP, LLMs
ML Tools : Sklearn, XGboost, PyTorch, Tensorflow, Keras, Pytorch-Geometric, Deep Graph Library, NetworkX, OpenCV, Transformers, LangChain
MLOps : MLFlow, Prefect, CI/CD(Github Action),Grafana, Docker
Developer Tools: VS Code,Amazon Web Service, Google Cloud Platform, Digital Ocean
Technologies/Frameworks: Linux, Git, Flask, FastAPI, Celery

Publications

Lakha, Bishal, Jason Duran, Edoardo Serra, Francesca Spezzano. 2023 .**Prediction of Future Nation-initiated Cyberattacks from News-based Political Event Graph** In 10th International Conference on Data Science and Advanced Analytics (DSAA 2023)

Pathak, Royal, **Bishal Lakha**,Rohan Raut, Steven Kim, Francesca Spezzano. 2023 **Unveiling Truth Amidst the Pandemic: Multimodal Detection of COVID-19 Unreliable News** In 5th Symposium on Multidisciplinary International Symposium on Disinformation in Open Online Media (MISDOOM 2023)

Lakha, Bishal, Kalyan Bhetwal, Nasir U. Eisty. 2023 .**Analysis of Software Engineering Practices in General Software and Machine Learning Startups** In 21st IEEE/ACIS International Conference on Software Engineering, Management, and Applications (SERA 2023)

Lakha, Bishal, Sara Lilly Mount, Edoardo Serra, and Alfredo Cuzzocrea. 2022. **"Anomaly Detection in Cybersecurity Events Through Graph Neural Network and Transformer Based Model: A Case Study with BETH Dataset."** In 2022 IEEE International Conference on Big Data (Big Data), 5756–64.

Scholarships/ Awards

Top Rated Freelancer: Upwork,(2017-2021)
FlipKarma Project Award: Second Position awarded in FlipKarma Project Competition for a Role Playing Game called C-Man made using C++ and SDL
IOE Scholorship: Merit-based Scholarship to study BE, Electronics and Communication Engineering at IOE, Pulchowk Campus (2012-2016)

Leadership / Extracurricular

Vice President: Boise State AI Club
Vice President: Boise State Competitive Coding Club
Financial Officer: Nepalese Student Association BSU
Event Ambassador: Deeplearning.ai, 2020
Volunteer Junior ML Engineer:Omdena, 2020
Coursera Community Mentor: Introduction to Complex Analysis, 2017,2018
Editor: Limelight, a Technical Student Journal (2016)