SUMAN LAMSAL

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EDUCATION

Indiana University *August 2024 - Present*
Master of Science in Computer Science
Currently pursuing advanced studies in computer science with focus on algorithms, data structures, software engineering, and advanced AI/ML concepts.

Tribhuvan University *Nov 2019 - May 2023*
Bachelor in Electronics, Communication and Information Engineering
Comprehensive study of electronics, communication systems, and information engineering with focus on practical applications and theoretical foundations.

WORK EXPERIENCE

OCM Engineering Groups, LLC August 2023 - Present
Backend Engineer

- Working on Duke Energy team for pole data evaluation, pole inspection, and providing communications companies with comprehensive solutions for attachments.
- Pole data evaluation and inspection
- Comprehensive solution development for communications companies
- Backend system development and maintenance

Fuse Machines Jan 2023 - Jun 2023
AI Fellowship

- Specialized in traditional machine learning algorithms, deep learning applications, and data visualization. Gained expertise in NLP, computer vision, and speech recognition.
- Mastered linear regression, logistic regression, decision trees, random forests
- Experience with regularization and parameter tuning
- Skills in data visualization and model evaluation

Everestwalks Groups Nov 2022 - May 2023
Data Engineering and Analytics Intern

- Developed and optimized ETL pipelines using Python and SQL, enabling real-time analytics integration and data-driven business decisions.
- Reduced data processing time through pipeline optimization
- Conducted exploratory data analysis on complex datasets
- Collaborated with cross-functional teams for business insights

PROJECTS

Offline Handwritten Signature Verification
Developed a CNN-based system for offline handwritten signature verification using writer-independent features and Euclidean distance analysis.

Lane Detection for Self-Driving Cars
Built a lane detection model using OpenCV, NumPy, and matplotlib for autonomous vehicle navigation and road safety.
Heart Rate Prediction Model
Developed a deep learning model for heart rate prediction using PPG and accelerometer signals with 1D-CNN and NLL loss function.
BERT for AI-Generated Text Detection
Implemented a BERT-based model to detect AI-generated text, providing robust classification for content authenticity verification.
Generative Adversarial Networks (GAN)
Developed GAN models using Fashion MNIST dataset for image generation, demonstrating expertise in generative AI and adversarial training.

TECHNICAL SKILLS

Linux & Data science, ML/AI, Natural Language Processing , Computer Vision
Data Structure & Algorithms, Digital logics, Python, Java, C/C++, MS Office, Latex
HTML, CSS, JS, & AWS, Docker
PyTorch, TensorFlow, SQL

SOFT SKILLS

Data Analysis, Statistical Analysis, Problem Solving
Model Optimization, Code Review & Testing, Agile Development
Team Collaboration, Continuous Learning, Project Management

ACADEMIC ACHIEVEMENTS

Achieved Mahatma Gandi Scholarship for high school program
Awarded with Nepal Government Scholarship for Bachelor's Program

EXTRA-CIRRUCULAR

Member of Robotics Club, IOE

Conducted Locus Program in Pulchowk Campus, IOE