Prashanna Raj Pandit

Maryville, IL 62062, USA +1(618)471-8552 ppandit@siue.edu prashannaraj.com.np
linkedin.com/in/ra-prashanna github.com/Prashanna-Raj-Pandit

Summary

Graduate student in Computer Science with research experience in deep learning, computer vision, and natural language processing. Skilled in Python, R, SQL, and modern ML frameworks. Strong background in academic research, software engineering, and data-driven problem solving.

Skills

Languages & Frameworks: Python, R, C, C++, SQL, Flask, Tensorflow, Keras, REST API, YOLO, OpenPose
Libraries: Pandas, NumPy, Scikit-Learn, SciPy, Matplotlib, Seaborn, OpenCV, Selenium, JSON
Tools: Git, GitHub, Tableau, Linux, PyCharm/Visual Studio, Jupyter Notebook

Experience

Research Assistant **Jan 2025 – Present**
Southern Illinois University Edwardsville *Edwardsville, IL, USA*

- Extracted 2D keypoints from 106 video datasets using OpenPose and processed JSON data with Pandas and NumPy to compute gait kinematic features (stride length, cadence, joint angles).
- Preprocessed gait time-series data via cubic spline interpolation, Savitzky–Golay smoothing, gait phase detection, and turn removal; engineered a multimodal dataset for deep neural networks.
- Developed a logistic regression baseline achieving 72% accuracy and a deep learning model (80K parameters) achieving 88% accuracy on gait classification.

Software Engineer Intern **Jan 2023 – Jul 2023**
Vrit Technologies *Kathmandu, Nepal*

- Designed and deployed the FootBalance-Nepal website with Flask backend and Sheety API integration, improving SEO score from 71 to 88 and performance score from 81 to 95.
- Collaborated on full-stack development and optimized backend workflows for scalability and maintainability.

Projects

Predictive Analytics on Iranian Telecom Data | *R, ML, Tableau* **Academic Project**

- Forecasted telecom network usage using Poisson, Negative Binomial, Ridge, and Lasso regression models, addressing overdispersion and multicollinearity. Reduced RMSE by 34% through optimized modeling and feature engineering.
- Classified customer complaints with Logistic Regression + SMOTE, improving AUC from 0.8206 to 0.924 and accuracy to 87.5%.
- Visualized model results and insights in Tableau; published full analysis on GitHub.

MedNLPify | *Deep Learning, NLP, Flask, Chrome Extension* **Academic Project**

- Developed deep learning models with token, character, hybrid, and positional embeddings to classify sentences in 200k PubMed RCT abstracts.
- Improved accuracy from 72.5% (baseline) to 85.6% using a Tribrid model
- Built an end-to-end NLP pipeline including preprocessing, model training, and deployment as a web app and Chrome extension.

Publications & Awards

- **Best Paper Award – ICT-CEEL 2023:** Presented *"Automation of Driving License Test using Computer Vision and Image Processing"* at the International Conference on Technologies for Computer, Electrical, Electronics Communication.
- Built CarSight, an AI-powered prototype to automate driving license tests in Nepal, evaluating maneuvers such as the 8-test, U-turns, and traffic sign compliance, achieving 95% detection mAP with YOLOv5.

Education

M.S. in Computer Science **Expected May 2026**
Southern Illinois University Edwardsville *Edwardsville, IL, USA — GPA: 3.84 / 4*

B.E. in Electronics, Communication and Information Engineering **Nov 2018 – Mar 2023**
Tribhuvan University, Institute of Engineering (Pulchowk Campus) *Lalitpur, Nepal — GPA: 3.75 / 4*