Prashanna Raj Pandit

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EDUCATION

Southern Illinois University Edwardsville (SIUE) Edwardsville, IL,USA
Master's in Computer Science   (GPA:3.7/4) *Expected Graduation-* May 2026
Tribhuvan University, Institute of Engineering (IOE) , Pulchowk Campus Lalitpur, Nepal
Bachelor's in Electronics, Communication and Information Engineering (GPA:3.65/4)) Nov 2018-Mar 2023

TECHNICAL SKILLS

Programming language: Python, R, C, C++, SQL, HTML, CSS
Libraries: Pandas, Numpy, Scikit-Learn, SciPy, Matplotlib, Seaborn, OpenCV, Selenium, Beautiful Soup
Frameworks: Flask, Tensorflow, Keras, RestAPI, YOLO, Openpose
Software/Tools: Git, GitHub, Linux, Postman, Pycharm, Visual Studio, Colab, Google Tools, Jupyter Notebook

EXPERIENCE

Southern Illinois University Edwardsville Edwardsville, IL
Research Assistant Jan 2025- Present

- Extracted 2D keypoints from 80+ video datasets using **OpenPose** to analyze gait biomechanics.
- Parsed and cleaned **JSON** data using **Pandas** to compute gait kinematic parameters (stride length, step length, cadence, joint angles, walking speed, and gait phases), and visualized insights with **Matplotlib** and **Seaborn** for motion analysis.
- Engineered gait-related features to analyze and forecast movement patterns while leveraging **SciPy** and **NumPy** for time-series signal processing, improving human motion tracking and analysis accuracy.

Vrit Technologies Kathmandu, Nepal
Software Engineer Intern Apr 2023-Jul 2023

- Designed and implemented **Python applications**, leveraging core programming concepts such as functions, object-oriented programming, and file handling. Built dynamic web applications using **Flask** and **Jinja** templating.
- Gained hands-on experience with **APIs**, HTTP requests, **JSON** handling, and browser automation using tools like **Selenium** and **Beautiful Soup** to automate workflows and enhance productivity.
- Utilized Python libraries such as **Pandas**, **Matplotlib**, and **Plotly** for data cleaning, analysis, and visualization.

PUBLICATION

Automation of Driving License Test using Computer Vision and Image Processing *Link:* Full Paper
Presented at: International Conference on Technologies for Computer, Electrical, Electronics & Communication (ICT-CEEL 2023)(October 2023)

- Developed CarSight, an AI-driven driving test automation prototype using **YOLOv5**, achieving **95% mAP** in real-time vehicle detection.
- Automated evaluation of the 8-test, U-turn, side light detection, and traffic sign violations for fair and accurate assessments.

HONORS AND AWARDS

- Best Paper Award at the International Conference on Technologies for Computer, Electrical, Electronics & Communication (ICT-CEEL 2023)
- Winner of All Nepal Hackathon 2023