

# ISHWAR SONI

Udaipur, India

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## Summary

Computer Vision and Motion Processing engineer with hands-on experience in human motion analysis and pose estimation. Worked on large-scale motion capture datasets using AMASS and StableMotion, building and debugging SMPL/SMPL-H preprocessing and inference pipelines involving skeleton retargeting, coordinate transformations, and BVH motion validation. Strong in Python and applied machine learning workflows.

## Experience

### Semantic Labs

*Computer Vision / Motion Processing Intern*

**Nov 2025 – Jan 2026**

*Remote — Dubai, UAE*

- Developed and maintained large-scale motion capture preprocessing pipelines on AMASS datasets within the StableMotion framework.
- Worked with multi-sequence human motion data involving complex joint hierarchies and coordinate system conventions.
- Debugged and optimized SMPL / SMPL-H inference pipelines, resolving 3D orientation flips, global scaling mismatches, and joint inconsistencies.
- Improved motion quality by stabilizing noisy sequences using temporal smoothing and coordinate transformations.

## Technical Skills

**Computer Vision & Motion:** Human Motion Analysis, Pose Estimation, SMPL, SMPL-H, BVH

**Machine Learning & Data:** NumPy, Pandas, Scikit-learn, Model Evaluation

**Programming & Tools:** Python, Git, GitHub, Jupyter Notebook

## Projects

### Bengaluru House Price Predictor | *Python, XGBoost, FastAPI*

- Built an XGBoost-based house price prediction system optimized for lower MAE and RMSE on high-variance housing data.
- Cleaned and processed 13,000+ property records, handling missing values and outliers.
- Deployed a FastAPI-based inference service with input validation to support real-time predictions.
- Implemented a lightweight frontend to enable seamless user interaction with the prediction API.

### Modular ML Pipeline Architecture (Titanic) | *Scikit-learn*

- Designed an end-to-end Scikit-learn pipeline using ColumnTransformer to automate preprocessing for mixed feature types.
- Improved model accuracy by 6% (75% → 81%) by eliminating training–serving skew.
- Prevented data leakage by encapsulating preprocessing and classifier logic within a single unified pipeline.

### AmbitionBox Company Data Scraper | *Python, Requests, BeautifulSoup*

- Developed a Python-based scraper to extract structured data for 10,000+ companies across 500 web pages.
- Parsed complex HTML structures and consolidated raw data into Pandas DataFrames for downstream analysis.

## Certifications

Microsoft Applied Skills – Develop Generative AI Apps with Azure OpenAI & Semantic Kernel (Feb 2026)  
NVIDIA Certification – RAG Agent Development (Nov 2025)

## Education

### Techno India NJR Institute of Technology

*Bachelor of Technology in Computer Science*

**2023 – 2027**

*Udaipur, India*