SHILPANSHU

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PROFESSIONAL SUMMARY

Emerging fashion-tech engineer from NIFT New Delhi passionate about building next-gen Virtual Try-On (VTO) and AR experiences. Expert in blending apparel domain knowledge with technical skills in Full-Stack development, AI/ML (ONNX, PyTorch), and real-time body tracking.

EXPERIENCE

Assistant Manager - R&D   Jun 2025 – Present

Apparel4Tech

- Enhanced iSmart desktop application with new features and improvements.
- Developed internal dashboards for real-time visibility of client status and project updates.
- Evaluated CV/AI models including DINO and SAM to determine optimal product pipelines.

Independent Researcher (GP)   Jan 2025 – May 2025

Shahi Chair, NIFT

- Developed a full Virtual Try-On (VTO) system with pose tracking and Unity garment overlay.
- Built real-time AR pipelines using BlazePose and RVM for functional prototypes.
- Awarded a ₹1,00,000 scholarship for innovation and excellence in VTO development.

PROJECTS

AI-Powered Virtual Try-On & Image Suite

Architected and built a High-Performance AI Portfolio featuring Virtual Try-On and Auto-Background Removal tools. Developed a custom FastAPI microservice serving BiRefNet and SAM 2 models via Docker. Integrated Google Gemini Multimodal API with MediaPipe Pose Detection to create a context-aware generative fashion tool. Implemented global distributed rate-limiting using Firebase Firestore to manage AI API quotas. Engineered a high-performance React + TypeScript frontend with advanced Canvas API manipulation for real-time image editing and masking.

Tech Stack: React.js, TypeScript, FastAPI, Docker, PyTorch, Firebase, MediaPipe

AR-Based Virtual Try-On Mirror

Real-time AR garment try-on system using Intel RealSense D415, Unity Sentis, and BlazePose.

Tech Stack: Unity, Intel RealSense, Unity Sentis, RVM, BlazePose

3D Car Showroom with VR Integration

Interactive Porsche showroom concept with VR stations for live feature exploration and spatial interaction.

Tech Stack: Blender, VR

Robotic Arm & Line-Following AGV

Developed a 6-axis robotic arm and autonomous AGV using microcontrollers and CAD design.

Tech Stack: Arduino, Raspberry Pi, Fusion 360

EDUCATION

National Institute of Fashion Technology   New Delhi

Bachelor of Fashion Technology   Aug 2025

SKILLS

React.js • TypeScript • Tailwind CSS • FastAPI • Python • PyTorch • Docker • Firebase • Hugging Face • Google Gemini API • MediaPipe • Unity • HDRP • AR Foundation • Sentis • Blender • Clo3D • Fusion 360 • AutoCAD 3D • TukaCAD • BlazePose • OpenPose • RVM • MODNet • ONNX • C++ • Arduino • Raspberry Pi • Mechatronics • Web Development