Sanjana Jain

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SUMMARY

My goal is to **model voluntary human movement** and design interactive systems with **computer vision and machine learning**. I spent 3+ years as a software analyst maintaining large-scale enterprise systems at Deloitte. I am a **National hackathon winner** in **augmented reality (AR)** and **virtual reality (VR)**.

HACKATHONS & AWARDS

- **1st Prize National Winner, Smart India Hackathon**
  Future Generali Mixed Reality Application   *Mar 2019*
  - Built a **Mixed Reality insurance support** tool to streamline customer onboarding and explain claim processes.
  - Selected as the national winner for innovation, technical execution, and real-world applicability.

- **Finalist, Build for Digital India Hackathon, Google**
  RetailAR: Retail Augment Reality   *Feb 2020*
  - Developed a single-point end-to-end AR-based interface to **improve shopping experience** for retail customers.
  - Integrated navigation of stores via **geofencing**, product information via QR, and **recommendations** via **ML**.

- **Scholarship, Spark AR Open Program, Facebook**
  School of Innovation India from Facebook   *Mar - Jun 2020*
  - Among **top 250** teams out of 10,000 students to receive scholarship and certification to Spark AR flagship program.
  - Fully-funded intensive training on Spark AR, **3D modeling**, **Visual Scripting** and Reactive Programming.

- **South Asia Winner, OpenCV AI Competition**
  Gait Analysis for Parkinson's Disease   *Mar - Aug 2021*
  - **Phase 1 winners** of the South Asia Region and qualified among the **top 150 research** projects worldwide.
  - Support early screening of Parkinson's through **joint motion patterns in walking videos** with computer vision.

WORK EXPERIENCE

- **Deloitte USI**   Gurgaon, India
  Identity and Access Management, Cybersecurity   *Feb 2021 - Apr 2024*
  - Managed end-to-end access provisioning for enterprise applications across both Windows and Linux environments.
  - Resolved server authentication failures caused by Centrify package issues, cache problems, and configuration errors.
  - Fixed authorization issues in Linux servers by correcting AD group memberships and privilege misconfigurations.
  - Recognized with multiple Spot Awards and an Applause Award for reliable execution in critical access operations.

- **Internship: Elixar Systems**   Delhi, India
  AR Developer Intern   *Apr 2020 - Jun 2020*
  - Built augmented reality simulations aligned with Grade IX and X science curriculum.
  - Mapped textbook images to interactive 3D models in an Android application using image-based marker recognition.

EDUCATION

- **Jaypee Institute of Information Technology**   Noida, India
  B.Tech in Computer Science   *Aug 2017 – May 2021*
  - GPA: 7.2/10 (cumulative), 8.45/10 (senior year).
  - **Relevant Coursework:** Machine Learning & Natural Language Processing, Matrix Computations, Operations Research, Computer Graphics, Image Processing and Analysis, Algorithms & Problem Solving, Data Structures, Operating Systems and Systems Programming, Database Systems & Web, Computer Networks,
  - **Scholarship**: *Awarded a scholarship and recognition certificate by the university for securing a national win*

Research Projects

Gait Analysis for Parkinson's Disease _2021_
Prof. Suma Dawn, OpenPose, OpenCV _Senior Year Project_
- _Computer Vision Solution for an inexpensive, accessible and effective diagnosis of Parkinson's Disease_
- _Used Background Extraction, Noise Filtering, Morphological Transformation to achieve skeletonization._
- _Motion-cue extraction using cosine similarity was done, in order to find to analyze gait._

EduAR – Interactive AR Learning Platform 2020
Prof. Suma Dawn, Unity, C#, Flutter, Dialogflow _Junior Year Project_
- Built an interactive AR learning application that visualizes science concepts using 3D simulations and animations.
- Integrated a chatbot and Slack interface to facilitate quizzes and real-time Q&A environment in remote settings.

Selected Projects

Lightweight Motion Question and Answer 2025
Python, MediaPipe, PyTorch, OpenAI API _Independent Project_
- Built a lightweight system for querying info about human motion in short video clips.
- Designed end-to-end browser workflow for uploading videos and generating motion-aware responses.

AR/VR COVID-19 Awareness Simulation 2020
Unity, Vuforia, C#, Blender _Junior Year Project & Dishathon_
- Created VR environments modeling COVID-19 transmission patterns in common public spaces.
- Built interactive AR simulations to demonstrate how distancing and mask usage influence exposure risk.
- Implemented physics-based behaviors and optimized scenes for real-time mobile-friendly performance.

Music Player Application 2020
Android Studio _Course Project_
- Built a lightweight Android music player that auto-detects and renders all local audio files.
- Lets users browse by albums, artists, playlists, folders, and genres and supports multiple audio formats
- Enabled playlist creation and seamless sharing of tracks with friends.

VirFrame: Interactive COVID Awareness Game 2020
Unity, C#, Photoshop _GMTK Game Jam_
- Designed a 2D platformer where each player is randomly assigned to play as a "good" or "bad" virus character.
- Developed gameplay rules focused on unpredictability and engagement to gamify Covid-19 awareness.
- Implemented core gameplay logic, UI, and game assets for a time-bounded international game jam.

FurnitureAR: In-Home AR Furniture Visualization 2020
Unity, C#, Blender _WieHack_
- Created an AR application enabling users to virtually place and visualize furniture in their homes before purchase.
- Handled object placement, scaling, and simple lighting to maintain realistic appearance in varied environments.

Technical Skills

- **Programming:** Python, C++, JavaScript, C#
- **Tools/Engines:** Unity3D, Android Studio, Blender, Adobe Photoshop, IBM Watson
- **Frameworks/Platforms:** ARCore, Vuforia, TensorFlow, OpenCV, Git, Linux
- **Interests:** Game Development, AR/VR, Computer Vision, Machine Learning

Leadership & Extracurriculars

Game Dev and Graphics Society Jaypee Institute of Information Technology
Coordinator _2019 – 2020_
- Organized Unity game jams and delivered hands-on workshops on 2D and 3D game development
- Led Photoshop workshops and mentored juniors in foundational game art and asset creation.

Dance Certifications and Workshops
Kathak, Contemporary, Hip-Hop
- Formally trained across multiple dance styles, including completion of an 8-year diploma in Kathak.
- Led online and offline workshops and performed at cultural events and competitions.