

# Aarnav Sangekar

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## SUMMARY:

A passionate engineer with a drive to learn and work with new technologies to create unique solutions to real world problems. Excellent analytical, design-thinking, problem-solving, communication and team skills.

## EDUCATION:

**Atharva College of Engineering (Mumbai University), Mumbai, India**

**May 2024**

**Bachelor of Engineering in Information Technology, CGPA 9.64/10**

- Courses taken include Image Processing, Information Retrieval Systems and IoE.
- Made the toppers list on the college website for multiple semesters.

## COMPUTER SKILLS:

- Programming Languages: Java, JavaScript, Python, C, C#, C++, Dart, HTML, CSS, TypeScript
- Game Engines: Unity 3D, Unreal Engine
- Design Tools: Blender, Premiere Pro, After Effects, Photoshop, Illustrator, Pixilart, Canva, Figma
- Tools and Technologies: Git, Node, React, Express, MongoDB, MySQL, Flutter

## EXPERIENCE:

**e-Yantra IIT-Bombay, Mumbai, India**

**Summer Intern(EYSIP)**

**May 2023 - Jul 2023**

- Designed and developed a 3D Virtual Museum website to display 3D models and information uploaded by school students participating in e-Yantra's project based learning competition "Virtual Museum". The virtual museum dynamically expands based on the number of artifacts stored in the database. Presented A Virtual Reality based Virtual Museum at Akhil Bharatiya Shiksha Samagam 2023 inaugurated by the Hon'ble Prime Minister at Akhil Bharatiya Samagam, Pragati Maidan, New Delhi.
- Also worked on a side project to research ways to teach robotics to school kids in a more interesting way, where I got an opportunity to take a session on the "sense-act-think" paradigm with 50 Bhutanese school students from Royal Academy of Bhutan.

**EvolutionCo, Bombay, India**

**VR Intern**

**Dec 2021 - Apr 2022**

- Worked on a Virtual Reality application for Schindler, the German moving parts company specializing in elevators. The VR application allows architects and designers to visualize different panellings and materials in the elevator, and generate a sheet of materials and costs.
- Used Blender for designing Elevator Walls and control panels and Unity3D with OpenXR for developing the VR application, and HTC Vive for the VR Device.

## PROJECTS:

**Martial Arts Tutoring using AR & VR**

**Jul 2023**

- A VR application that tracks the entire body. We will use a VR headset and external cameras for body tracking. Unity Engine and Oculus Virtual Reality Plugin for the hand tracking and head tracking. External cameras will use OpenCV and Mediapipe for body tracking and send data to Unity using a websocket.
- Use the AR application on a mobile phone using ARCore to visualize the fighter on a separate phone device

**AutoToller**

**Jul 2023 - Oct 2023**

- AutoToller revolutionizes toll collection by deploying NodeMCU devices at tollgates, eliminating manual processes.
- Using ultrasonic sensors and cameras, the NodeMCU captures vehicle license plates, employing OpenCV for detection and easyocr for plate text extraction. The device transmits road and entry details, along with license plate data, to a Render.com-hosted express JS Web server, which, in turn, stores the information in a MongoDB Atlas Database.

**AR Based Greeting Card**

**Dec 2022**

- Utilizing Unity, Blender, and Canva, I designed a unique digital greeting card with AR capabilities, initially inspired by a friend's birthday.
- The project has evolved to include features like fireworks and 3D text, and I'm currently exploring additional customization options and the potential development of a website for creating similar augmented reality greeting card experiences.

**ExploAR**

**Dec 2021 - Jan 2022**

- Built an educational app for school students where they can visualize their subjects with the help of AR Technology. Made Using Unity 3D.

## ACTIVITIES:

- Worked in **TEDxACE 2022 & 2023 Chapter** as **Curation Lead & Video Production Lead**, where I lead curators to find and finalize the best speakers for the event and curated speaker's speeches. Also lead video editors to edit and make sure the videos are well made with correct color grading and good cinematography. Also came up with the idea of using and designing a 3D model of the Stage to use as a background in the videos.
- Worked in **GDSC ACE 2022 Chapter** as a part of the **Core Team** and **AR/VR & Game Development Lead** where I worked on organizing hackathons and workshops on different Technologies
- Participated in **e-Yantra Robotics Competition** where we worked on "Soil Monitoring Bot" theme using Verilog HDL, Quartus Prime and an FPGA, and worked on "Pharmo Bot Theme" using Python, OpenCV, CoppeliaSim, and Raspberry Pi
- Technical Volunteer at **IEEE ACE**, where I worked on a Self-Driving Car. Implemented AR Switch for Car using Blink API and Unity. as well as an AR based windshield Navigation called AR Nav For Car using Unity3D.