Ayush Sukhadan Nair

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Education

Fr. C. Rodrigues Institute of Technology **Vashi, Navi Mumbai**
Bachelor of Engineering in Information Technology *2022 – 2026*
- CGPA: 9.55/10.0

Work Experience

IISER Mohali x TIFR **Mohali, Punjab**
Project Intern *June 2025 – Present*
- Architecting **silicon sensor modules** for **high-energy physics experiments** with **3 team members**.
- Automating validation of **500 sensor wire bonds** using **ML models** and high-resolution scanner images.

Sports Mentoring Infusion - NGO **Remote**
Backend + Analytics Developer *September 2025 – Present*
- Developing production-grade application with **base authentication system** and **all core modules** implemented.
- Building platform architecture to serve **150+ users** across **4 user roles** (admins, students, coaches, volunteers).
- Implementing communication workflows to reduce manual coordination time by **70%** for **10+ coaches**.

IISER Mohali **Mohali, Punjab**
Project Intern *July 2024 – June 2025*
- Engineered fall detection system using **YOLOv8-OBB + MediaPipe**, reducing false positives by **60%**.
- Created healthcare solution for **live monitoring and feedback** for immediate response.

Fr. Conceicao Rodrigues Institute of Technology **Vashi, Navi Mumbai**
Developer Intern *July 2024 – June 2025*
- Optimized college portal serving **1,000+ users** with enhanced performance and functionality.
- Built **information management system** for managing college data and information.

Projects

Delta Investments | *MERN Stack, AI Integration* **2024**
- Architected investment platform with **real-time stock data** and **Gemini AI** integration.
- Implemented **auto trading feature** with AI-powered market analysis and risk management.

VaniConnect: Sign Language Transcriber | *Python, Computer Vision* **2024**
- Constructed real-time gesture translation system with **85% accuracy** across **200+ sign patterns** for both **Indian and American sign languages**.
- **Won 1st place** in Summer Project Competition among **60+ participants**.

Expense Ease | *Java, JavaFX, MySQL* **2023**
- Developed comprehensive expense tracking application with **CRUD operations** for transactions, savings, and budget management.
- Integrated **data visualization** with pie and bar charts for category-wise spending analysis and budget alerts.
- Built **borrow/lend tracking system** with automated due date reminders and user-friendly JavaFX interface.

Open Source Contribution Tracker | *React, Node.js, MongoDB* **2024**
- Developed analytics platform to provide analysis and tracking for **20+ GitHub repositories**.
- Enabled users to view details of their open-source contributions and generate shareable links to showcase them on platforms like LinkedIn.

Achievements & Leadership

GirlScript Summer of Code (GSSOC'25) **Open Source Program**
Selected Contributor *2025*
- Contributed to **AlgoVisualizer project** by adding **custom array input feature** for sorting and searching techniques.
- Enhanced **frontend design** of documentation page, improving user experience and accessibility.

HackQuinox 2024 - CSI FCRIT **Mumbai, India**
Top 5 Finalist *2024*

Smart India Hackathon **Government of India**
Internal Round Qualifier *2024*

Computer Society of India - IT Department **FCRIT**
Treasurer *2023 – Present*
- Handled finance for CSI-IT events, managing budgets up to **INR 30,000** with sponsorship incentives.

Technical Skills

Languages: Python, Java, JavaScript, SQL
Frontend: React, HTML/CSS, JavaScript
Backend: Node.js, Express, MongoDB
ML/AI: TensorFlow, Scikit-learn, Computer Vision
Databases: MongoDB, MySQL, ChromaDB (Vector Database)
Tools: Docker, GitHub Actions