

# Sachin Arvind Kishan

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B.Tech - Computer Science and Engineering

Vellore Institute Of Technology, Vellore, India

[Github](#)

[LinkedIn](#)

## EDUCATION

| Degree/Certificate | Institute/Board                 | CGPA/Percentage | Year         |
|--------------------|---------------------------------|-----------------|--------------|
| B.Tech.CSE         | Vellore Institute of Technology | 8.59 (Current)  | 2020-Present |
| High School        | CBSE Board(India)               | 91.0%           | 2020         |

## CAREER EXPERIENCE

- Massachusetts Institute of Technology - Summer Geometry Initiative** Jul. 2024 - Aug. 2024  
*Research Fellow* Remote
  - The program provides 6 weeks of intensive geometry processing research. I worked with several researchers from MIT, Stanford and Delft on different projects.
  - Researched and programmed a prototype of splines whose arc length can be calculated analytically while retaining continuity properties
  - Researched and implemented GPU applied geometry processing applications using RXMesh. [Click for GitHub link](#)
  - Researched and implemented global intersection analysis, a cloth collision resolution technique. [Click for GitHub link](#)
  - Implemented an open source shadertoy and web viewer for Chladni Patterns. [Click for GitHub link](#)
- Mimyk(IISC incubated deep tech company)** Jan. 2024 - Jul. 2024  
*Research Intern* Bangalore
  - Developed a working implementation and verification of a patent in C++ from scratch that combines FEM and XPBD methods for real-time simulation and rendering for soft bodies in haptic simulations aimed to run at 1000 frames per second.
- DevLaunchers(Non-profit)** Oct. 2021 - Jul. 2022  
*Game Developer for DevBots* Remote
  - Developed a modular ability system in Unity using Scriptable Objects that cut down development time and allowed for greater focus on game design for customized features. Made a week-long endeavor into an hour-long task.
  - Developed an animation system and art asset pipeline for artists to test and integrate animation into the game.
  - Extensively documented code and usage for designers and future contributors.
  - Aided the development of a modular collision system that could easily be used anywhere for game-play features needing collisions.
- Studio nCore Pvt. Ltd** June 2022 - Jul. 2022  
*Game Developer Internship* Remote
  - Was assigned under the team working on a Disney-funded project.
  - Developed an extendable daily rewards design tool that can be applied across different games made in Unity.
  - Developed multiplayer game prototypes in Unity using the Photon framework
- P1(Non-profit)** Click for GitHub Link  
*Remote Game Developer Part Time* June 2023 - Dec. 2023
  - Researched methods to optimize mesh generation and rendering for large dynamic voxel worlds.
  - Worked on several gameplay-related tasks and bugs within a large developed code base.
  - Worked closely with artists to fix model and UV mapping issues for shader development within Unity
  - Introduced and guided at least 20 new members to join and start contributing to the programming team

## PROJECTS

- Narrative Game Engine** Click for GitHub link  
*C++*
  - Game engine written in C++. Acts as a tool for writers to create interactive narrative games in 3D worlds easily. Features an event system, OpenGL renderer, file scene saving system, scene editing and more in development.
- Rasterizer** Click for Github link  
*C++*
  - C++ rasterizer which includes camera clipping, renders cubes at different orientations and transforms, matrix operations library.
- Ray Tracer** Click for Github link  
*C++*
  - Wrote a Monte Carlo path tracer from scratch. Can apply different materials on spheres such as metals, diffuse objects and semi-transparent objects. Includes point lights, area lights, shadows, and supports multiple lights in a single scene.

## TECHNICAL SKILLS

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- **Programming:** C# , C, C++, HLSL, Java
- **Graphics APIs:** OpenGL - Currently developing a game engine
- **Mathematics :** Linear algebra, Calculus, MATLAB, Differential Calculus, Physics programming

## ACHIEVEMENTS

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- **IGDAF Scholar:** Awarded to students who show potential for a career in game development. Provides training and career sessions for entering the games industry.  
Only 3% of total applicants receive the award.    2023
- **IGDAF Alumni GDC Scholarship:** Invited with an all-access complimentary pass to Game Developers Conference in 2024.    2024
- **SGI Training Week:** Invited to the training week of SGI- a summer school hosted by MIT that teaches the foundations of geometry processing(was accepted to the entire program in the 2024 cohort).    2023
- **VIT Chancellor's Special Achiever Award:** Awarded to 0.5% of students in VIT for outstanding achievement.    2021

## EXTRA CURRICULAR ROLES AND ACHIEVEMENTS

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- **Equity Committee Role:** Served as a dedicated member of the VIT Debate Society's Equity Committee.
- **Breaking Team at UADC:** Part of the second highest-ranked Indian team in UADC(Asia's largest debate tournament) in 2021 and the first to get to knockout rounds from VIT    2021