Aryamaan Jain

Email: aryamaan.jain@inria.fr | **Website** | **Google Scholar** | **GitHub** | **GitLab**

Education

PhD in Computer Science, Inria, Université Côte d'Azur — October 2023 - *Present*
Lab: GraphDeco — *Advisor*: Dr Guillaume Cordonnier

B.Tech(Honours) + MS(Research) in Computer Science & Engineerging, IIIT Hyderabad — July 2019 - July 2023
CGPA: 9.55/10.0 — *Specialization*: AI — *Dean's/Merit List*: 6 semesters
Lab: CVIT — *Advisor*: Dr Avinash Sharma, Dr K S Rajan — *Thesis*: Virtual World Creation

Experience

Research Intern at GraphDeco, Inria — March 2023 - October 2023
Physically based terrain erosion simulation accelerated with a GPU implementation and learning based super-resolution.

Research Assistant at CVIT and IHub-Data, IIIT Hyderabad — August 2022 - January 2023
Mobility project: 3D reconstruction of roads with LiDAR data from vehicles using the ICP algorithm.

Summer Intern at Wells Fargo (Strategy, Digital & Innovation group), Bangalore — May 2022 - July 2022
VR banking on Oculus Quest 2: Developed 3D assets and scenes, integrated LLMs, and connected headset with AWS.

Teaching Assistant
Foundations of Modern Machine Learning, IHub-Data — January 2022 - October 2022
Computer Graphics, IIIT Hyderabad — Spring 2022
Computer System Organisation, IIIT Hyderabad — Spring 2021

Publications

Complete list on my **Google Scholar**

A. Jain, B. Kerbl, J. Gain, B. Finley, G. Cordonnier, "FastFlow: GPU Acceleration of Flow and Depression Routing for Landscape Simulation", *CGF (Pacific Graphics)*, 2024 — **Best Paper Award**

A. Jain, B. Benes, G. Cordonnier, "Efficient Debris-flow Simulation for Steep Terrain Erosion", *TOG (SIGGRAPH)*, 2024

A. Jain, A. Sharma, K S Rajan, "Learning Based Infinite Terrain Generation with Level of Detailing", *3DV*, 2024

Projects

Tree Generation : L-system based tree generator with Indian species and a Blender add-on.

Maze Game : 2D game with procedural mazes, enemies, obstacles, and power-ups in OpenGL and Python.

VR Portals : Unity VR game where players can shoot portals, see through, and partially pass through them.

Technical Skills

Programming languages: Python, C, C++, CUDA, GLSL, Java, C#, JavaScript, 8085 Assembly

Libraries & Frameworks: PyTorch, STL, OpenGL, OpenCV, OpenMP, Hadoop, MPI

Graphics Applications: Houdini, Blender, Unity, Terragen

Miscellaneous: Bash, Git, LaTeX