Abhigyan Gandhi

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PROFESSIONAL SUMMARY

MSc candidate in High-Performance Graphics and Games Engineering at the University of Leeds with a strong foundation in computer graphics, real-time rendering, and game engine architecture. Proficient in C++, C#, HPC/GPU programming, and modern graphics APIs (OpenGL, Vulkan), with hands-on experience in Unity and Unreal Engine.

Experienced through professional and award-winning academic projects in applying advanced techniques to interactive applications. Seeking entry-level opportunities in graphics and game programming, bringing both technical expertise and a passion for innovative game technologies. **Eligible to work in the UK.**

EDUCATION

MSc. High-Performance Graphics and Games Engineering, Distinction | University of Leeds | Sept 2024 - Sept 2025
- **Modules**: Foundation of Computer Graphics, Advanced Rendering, Modelling and Animation.
- **Dissertation**: Evaluating the performance and visual fidelity of real-time denoisers against NVIDIA NRD.

B.E. (Hons) Computer Science, Data Science, CGPA: 8.72 | BITS PILANI DUBAI CAMPUS | Sept 2018 - Sept 2022
- **Modules**: Machine Learning, Data Mining, Foundations of Data Science, Neural Networks.
- **Final Year Design Project**: Mobile Robot Path Planning using Deep Learning Techniques.

PROJECTS

- **Game Engine Development (C++, Vulkan, 2025):** Built a custom game engine and game; won **Game Republic Red Kite Games Game Technology Award** at the [Student Showcase 2025](#) (Group project).
- **LETTER SHIFT (Unity, C#, Ongoing):** Developing a daily puzzle game for mobile and web; preparing for release on [letter-shift.com](#) (demo) and Android (APK available on portfolio).
- **Ray Tracing and Rasterization (C++, OpenGL, Vulkan, 2024):** Implemented CPU-based ray tracer and GPU rasterizer to compare performance and visual fidelity.
- **Bezier Curves and Physics Simulation (C++, OpenGL, 2024):** Created a Bezier curve renderer and physics-based animation with collision detection for a character and bouncing dodecahedra.
- **Generative Art with GANs (Python, TensorFlow, 2020):** Trained GAN to generate Monet-style digital paintings.

WORK EXPERIENCE

Game Development Intern | Sentient Labs | Jun 2020 - Aug 2020
- Developed a game in **Unity** for the company's website; lifted user engagement by **25%**.
- Integrated art and sound assets into the game, collaborating with designers to ensure a polished product.
- Implemented core gameplay mechanics and UI systems in **C#** to deliver responsive player interactions.
- Worked in an agile team environment using Git, contributing to sprints and version control workflows.

AI/ML Intern | Stella Stays | Aug 2021 - Jan 2022
- Implemented predictive pricing model using **LSTM** and **regression,** improving base price accuracy to **10% MAPE** versus market price.
- Built a NLTK-based sentiment analysis pipeline for hotel reviews, achieving **80% accuracy**.
- Developed a room allocation algorithm based on **minimum slack** and **clustering**; led to a **+10% optimized** allocation method.

SKILLS

- **Programming**: C++, C#, GLSL, HLSL, CUDA, Python.
- **Graphics and Game Dev**: Vulkan, OpenGL, Unity, Unreal Engine, Physics Simulation, Game Engine Architecture, HPC/GPU Programming.
- **AI/ML**: TensorFlow, Scikit-Learn, Pandas, CNNs, GANs, Computer Vision.
- **Tools**: Git, Linux, Node.js, MATLAB.
- **Languages**: English(Fluent), Hindi(Fluent).
- **Technical highlights:** Shader programming, GPU optimization, physics simulation, real-time rendering.