

# GRAPHIC DESIGN

## BRANDCRAFTERS

### A MINI-PROJECT REPORT

*Submitted by*

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*in partial fulfilment for the course*

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RAJALAKSHMI NAGAR

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## BONAFIDE CERTIFICATE

Certified that this project report “ **MARKETING CAMPAIGN**” is the bonafide work of “LINGESH VK (221701032), KOTTESWARAN S (**221701031**)” who carried out the project work for the subject CD19651 – Mini Project under my supervision.

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**ABSTRACT**

This car animation video showcases the seamless integration of **Maya** and **Unreal Engine** to create a high-quality, realistic automotive simulation. The video features a dynamic car model navigating through various environments, demonstrating intricate details in both vehicle design and environment interactions. The animation emphasizes smooth, lifelike motion through realistic physics simulations, including accurate suspension movements, tire friction, and realistic driving behavior.

In **Maya**, the car model is meticulously created, rigged, and animated, with precise attention given to the vehicle's movement, material properties, and lighting. The animation incorporates advanced techniques such as keyframe animation, inverse kinematics, and dynamics to ensure the car reacts naturally to different terrains and driving conditions.

Once the car animation is ready, **Unreal Engine** is used for real-time rendering and environmental immersion. The engine's powerful lighting system, advanced textures, and visual effects bring the scenes to life, while the car's motion is enhanced with Unreal's physics engine for real-time interaction with the world. The combination of **Maya's animation capabilities** and **Unreal Engine's rendering power** creates an engaging, visually stunning experience that showcases both the artistry of the vehicle design and the technical prowess behind its motion and environment.

## ACKNOWLEDGEMENT

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# CHAPTER 1

## INTRODUCTION

Welcome to this exciting car animation showcase! In this project, we've combined the powerful 3D modeling and animation capabilities of **Maya** and **Blender** with real-time rendering from **Unreal Engine** to bring a dynamic and realistic car animation to life.

The car model was carefully crafted in **Maya** and **Blender**, with attention to every detail, from the bodywork to the intricate components under the hood. Using both software platforms, we employed advanced rigging and animation techniques to create fluid, lifelike movements of the vehicle, such as acceleration, suspension dynamics, and steering adjustments. The car moves smoothly across different terrains, capturing the essence of real-world physics.

After animating the car in Maya and Blender, the scene transitions into **Unreal Engine**, where we bring the environment to life with real-time lighting, effects, and textures. The Unreal Engine's powerful capabilities allow us to showcase the car's movements in a fully immersive, interactive world, ensuring the animation flows seamlessly.

This animation demonstrates not only the artistic and technical skill behind vehicle modeling and animation but also the integration of multiple platforms to achieve high-quality, visually stunning results. Sit back and enjoy this fusion of design, technology, and motion!

- **WHAT IS THE GAME ABOUT?**

A FAST-PACED DRIFTING AND RACING GAME  
INSPIRED BY JAPANESE CAR CULTURE.

- **WHY THIS PROJECT?**

CURRENT COMPETITORS (E.G., CARX DRIFT, NEED FOR SPEED) LACK MOBILE  
INTEGRATION AND TRUE CROSS-PLAY FEATURES.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **1. CarX Drift Racing: Gameplay-Focused Promotion**

CarX Drift Racing has primarily concentrated its marketing efforts on showcasing **gameplay clips**. By emphasizing the in-game experience through these clips, the game effectively highlights the core elements that appeal to its audience—particularly its drifting mechanics, car customization options, and realistic driving physics. Gameplay trailers have been a fundamental tool in demonstrating the game's mechanics, allowing potential players to see the action firsthand. These clips often circulate on platforms like YouTube, Twitch, and social media, offering an authentic, unfiltered view of the gameplay experience. However, this approach, while successful in attracting players who are already fans of drifting or racing

genres, **lacks an extensive promotional campaign** that extends beyond gameplay showcases. CarX Drift Racing has not heavily invested in more traditional marketing strategies such as **TV ads, influencer partnerships, or large-scale promotional events**, which may have limited its potential to reach a broader audience. The reliance on gameplay clips rather than a well-rounded, multi-channel marketing approach has made it more challenging to build a long-lasting community around the game.

## **2. Need for Speed: Strong Trailers with Limited Community Engagement**

The **Need for Speed (NFS)** franchise, on the other hand, is known for its **high-quality trailers** that often feature cinematic visuals, heart-pumping action, and a sense of rebellion. These trailers are produced to attract attention and spark excitement among fans, positioning the game as an adrenaline-filled experience with rich narratives and a focus on street racing culture. The use of cinematic trailers has been effective in generating buzz and anticipation, especially during the pre-launch phase. However, one significant shortcoming of NFS's marketing strategy is its **limited community-driven engagement**. While the franchise has a massive fan base, there has been a lack of sustained efforts to actively involve the community in the game's development or promotion. Unlike other franchises that leverage user-generated content, influencer campaigns, and interactive fan events, NFS has not consistently created opportunities for fans to directly contribute to the game's marketing or development. As a result, while trailers effectively drive initial interest, NFS has sometimes struggled to maintain long-term engagement with its audience, which can be critical in the ever-evolving gaming landscape where community interaction is key.

## **Conclusion:**

Both **CarX Drift Racing** and **Need for Speed** employ effective strategies, but they have limitations that could be overcome by adopting more comprehensive marketing plans. CarX Drift Racing could benefit from expanding its promotional activities beyond gameplay clips to increase visibility, while Need for Speed could enhance community engagement to create a more loyal, long-term fan base. A balance between gameplay highlights, cinematic

storytelling, and active community involvement is crucial for long-term success in the competitive racing game market.

## CHAPTER 3

### SOFTWARE USED

#### Overview of Autodesk Maya\*

*Autodesk Maya* is a comprehensive 3D computer graphics software that is widely used for creating animations, models, simulations, and rendering in a variety of industries, including film, television, video games, and architectural visualization. Known for its robust toolset, Maya is favored by professionals for its versatility and ability to handle complex 3D modeling and animation tasks.

#### *Key Features of Maya:*

##### 1. 3D Modeling:

- Maya provides powerful tools for \*polygonal modeling, \*\*NURBS modeling, and \*subdivision surface modeling, making it suitable for creating detailed 3D models of characters, environments, and objects.
- It also offers advanced sculpting tools, allowing for detailed organic and hard surface modeling.

##### 2. Animation:

- Maya is renowned for its \*animation capabilities, including \*\*keyframe animation, \*\*motion paths, and \*\*inverse kinematics (IK). It offers tools for \*\*character rigging, \*\*skinning, and \*facial animation.
- It also supports *non-linear animation (NLA)* for more complex animation workflows.

### 3. Rigging and Skinning:

- The software includes sophisticated tools for *rigging* characters, setting up skeletons, and binding them to mesh objects (skin). This allows animators to control and manipulate the characters' movements more efficiently.
- *Advanced deformation* systems are available for realistic bending and shaping of characters.

### 4. Rendering:

- Maya features powerful rendering capabilities, including *Arnold* (a high-quality renderer) and support for third-party rendering engines like *V-Ray* and *Redshift*.
- It allows for realistic lighting, shading, and texture mapping to create photorealistic images and animations.

## Blender Implementation :

3D modeling begins with setting up the workspace, units, and reference images.

For the bus model, the base shape is created using cubes and cylinders, which are then modified with loop cuts, extrusions, and bevels. Fine details such as windows, doors, and wheels are added. Materials are applied using the shader editor, and realistic lighting is set up before rendering the final model.

The college entrance model starts with blocking out the basic structure using simple geometric shapes. Architectural details such as columns, signboards, and gates are added.



Textures for walls, glass, and floors are applied using UV mapping. The final model is rendered with proper lighting and camera settings.

### Final Compilation

All elements are exported in high resolution and compiled into the project report. 2D designs are saved in PNG, PDF, or vector formats, while 3D models are rendered in high-quality images. The report is structured with clear sections, integrating visuals with descriptions to present a professional and cohesive design.



Fig 1: The user interface of the “ CANVA ” software.

## CHAPTER 4

### PRESENT TECHNOLOGY

#### **Present technology**

**The fields of 3D modeling, animation, and game development have evolved significantly with the latest advancements in Autodesk Maya, Blender, and Unreal Engine. These industry-leading tools continue to push the boundaries of creativity, realism, and efficiency in digital content creation.**

## **1. Autodesk Maya: Advanced Animation & Simulation**

**Maya remains a top choice for professional animation studios, offering advanced tools for character rigging, simulation, and procedural workflows. The latest updates include Bifrost, a powerful node-based simulation system for creating realistic water, smoke, and fire effects. Maya also integrates machine learning-based rigging and animation tools, which automate tedious tasks like weight painting and motion capture cleanup. Additionally, USD (Universal Scene Description) support enhances cross-platform collaboration, allowing seamless integration with other 3D software.**

## **2. Blender: Open-Source Innovation & Real-Time Rendering**

**Blender has rapidly gained popularity due to its open-source nature and cutting-edge updates. Eevee, its real-time rendering engine, allows artists to preview high-quality visuals instantly, while Cycles X, a path-tracing engine, delivers improved speed and efficiency for photorealistic rendering. The Geometry Nodes system enables procedural modeling, automating complex shape generation. Blender also supports VR sculpting, allowing artists to work in immersive 3D environments. With strong community backing, Blender continuously evolves through add-ons and developer contributions, making it a powerful tool for independent creators and professionals alike.**

## **3. Unreal Engine: Real-Time Graphics & Virtual Production**

**Unreal Engine has revolutionized real-time rendering, making it essential in game development, film production, and architectural visualization. Nanite technology**

allows for rendering billions of polygons without performance loss, while Lumen, a dynamic global illumination system, enhances lighting realism. Unreal is also at the forefront of virtual production, enabling filmmakers to create digital sets in real-time using LED volumes. The MetaHuman Creator tool simplifies character design, providing high-fidelity digital humans for games and cinematics. Additionally, Unreal's Blueprint scripting system makes game development accessible to non-programmers.

## **Conclusion: The Future of 3D Content Creation**

With continuous AI integration, real-time ray tracing, and procedural workflows, Maya, Blender, and Unreal Engine are shaping the future of 3D content creation. These tools are becoming more accessible, efficient, and powerful, empowering artists, developers, and studios to create high-quality digital experiences across multiple industries.

## **Software Advantages**

The software tools utilized in this project offer several distinct advantages, allowing for high-quality, efficient, and versatile graphic design workflows. Here are the key benefits of using the primary software packages for this project:

### **Adobe Illustrator**

1. **Precision and Scalability:** As a vector-based design tool, Adobe Illustrator allows for the creation of designs that can be scaled infinitely without losing quality. This is especially important for logos and other branding materials that require flexibility across various mediums and sizes.

2. **Advanced Typography:** Illustrator provides powerful typography features, enabling precise text manipulation, font pairing, and typographic hierarchy, which are crucial for designing ID cards, degree certificates, and promotional materials.
3. **Intuitive Drawing Tools:** The software's pen tool and shape builder allow for the creation of intricate and detailed designs with ease, making it ideal for logo creation and geometric-based artwork like calendars and posters.
4. **Efficient Workflows:** Illustrator's compatibility with other Adobe Creative Cloud tools (such as Photoshop and After Effects) allows for seamless transitions between applications, enhancing productivity and design consistency.

## CHAPTER 5

# OUTPUT

**PROJECT LINK:**

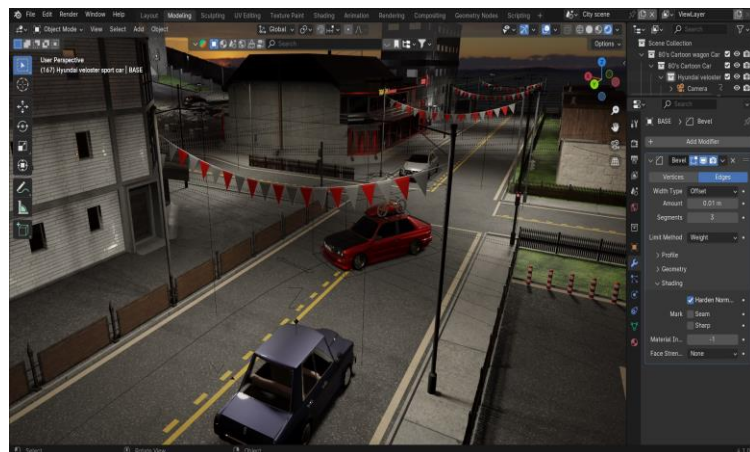
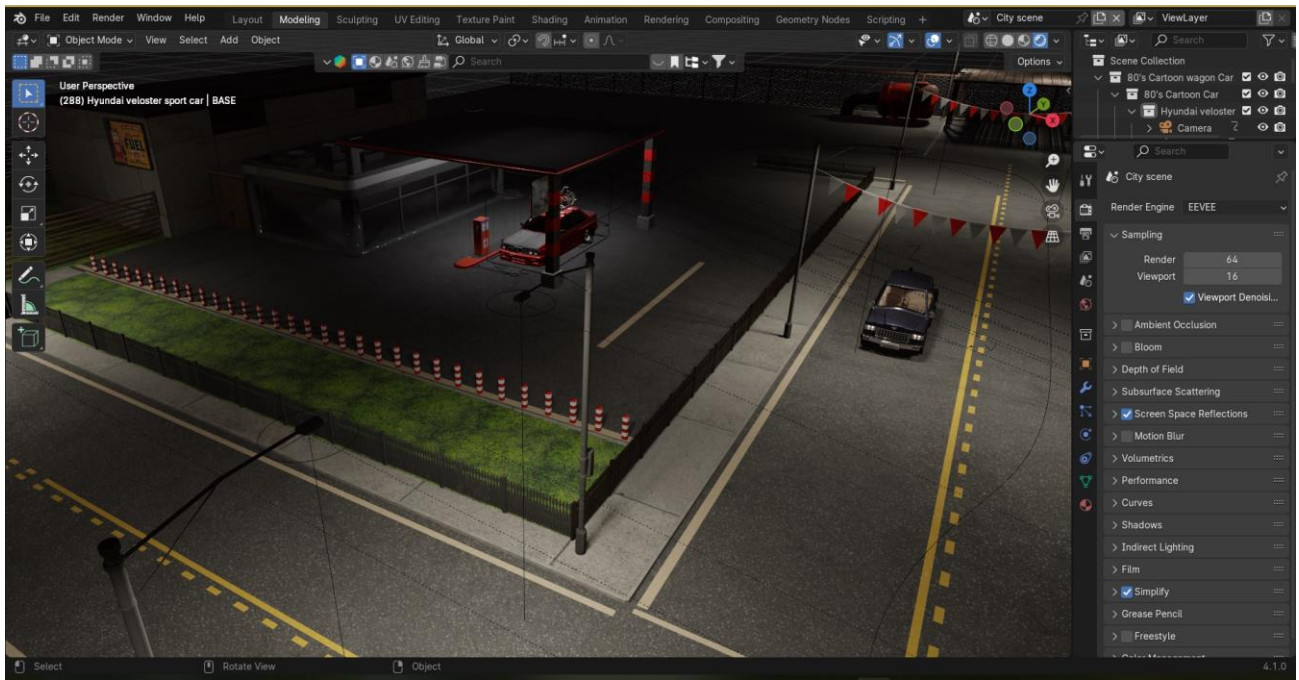
## LOGO DESIGN



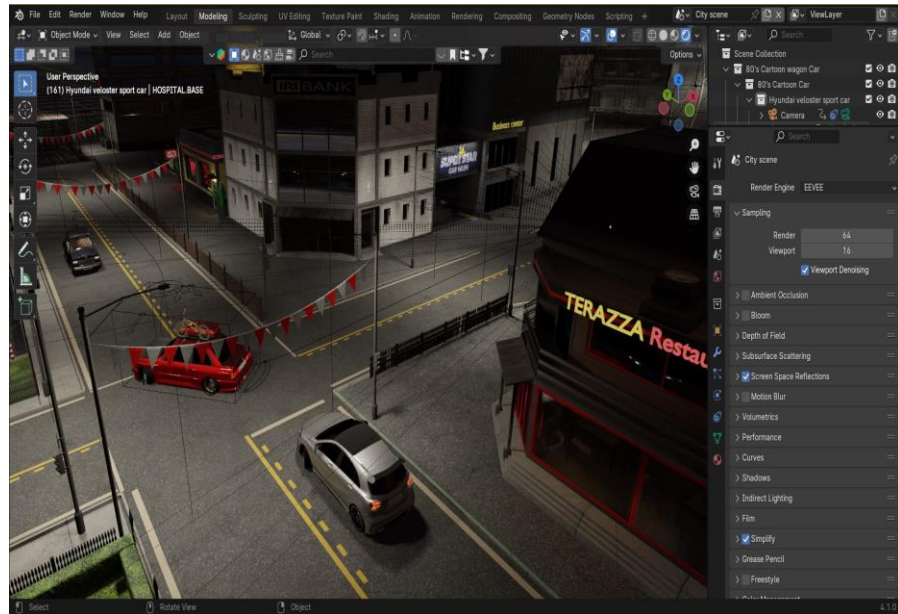
Innovate with creativity, design with purpose.

- Shaping the future through visionary design.
- Blending art, technology, and sustainability.
- Empowering minds to redefine possibilities.
- Excellence in design, impact in society.

**SAMPLE IMAGE**







## CHAPTER 6

### CONCLUSION

In conclusion, **From concept to completion, this animation showcases the seamless fusion of creativity and technology. Leveraging the power of Maya and Blender, every frame captures precision, motion, and realism, bringing the car to life with dynamic visuals and fluid animation. This project stands as a testament to the possibilities of 3D animation, pushing the boundaries of design and storytelling. Thank you for watching—stay tuned for more innovation in motion!"**

If you want something more specific, let me know the theme or purpose of your animation!

## REFERENCE

1.MAYA user Guide,"

<https://help.autodesk.com/view/MAYAUL/2025/ENU/>

2. BLENDER LINK FOR GUIDE,

<https://www.blender.org/support/>

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