

## **Project Proposal:** Virtual Reality-Based E-Commerce Web Application

### **Introduction:**

Online shopping has become a popular trend in recent years due to its convenience and cost-effectiveness. However, customers often face issues while shopping online as they cannot see how the product would look in reality. To overcome this issue, we propose to develop a virtual reality-based E-commerce web application named MetaMart, which will allow customers to shop in a virtually created store with 3D models of products.

### **Objectives:**

The main objective of this project is to create a virtual reality-based E-commerce web application that would provide a realistic and positive experience to customers in the metaverse. We will create a basic E-commerce website with all the necessary features and functionalities. Then, we will integrate a 3D tour and VR mode created in Unity 3D with the website. The application will initially focus on garments and outerwear as the main products, with 3D garments placed upon avatars with customized measurements so that customers can map them to themselves and choose the best suitable one.

### **Methodology:**

We will use the following methodology to achieve our objectives:

Conduct a literature review of existing virtual reality-based E-commerce applications and their features.

Develop the basic E-commerce website named MetaMart with all necessary features and functionalities, such as product search, shopping cart, payment gateway, and customer support.

Create 3D models of garments and outerwear and place them upon avatars with customized measurements.

Integrate a 3D tour and VR mode created in Unity 3D with the website, allowing customers to experience the application with an Oculus headset.

Test the application and collect feedback from users to improve its features and functionalities.

### **Deliverables:**

A virtual reality-based E-commerce web application named MetaMart with 3D models of products and VR mode.

A user manual and technical documentation for the application.

A project report documenting the development process and evaluation of the application.

**Conclusion:**

The proposed virtual reality-based E-commerce web application will provide an innovative way for customers to shop online with a more realistic and satisfying experience. This project will use advanced technologies like virtual reality and Metaverse concepts to enhance the shopping experience of customers. The application will be developed using the latest tools and techniques, and its success will be evaluated through user feedback.