**Virtual Jewelry Design Studio: A Python-based Software for Designing and Finding the right Match to the customer through Virtual Jewelry.**

**Group-11**

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**Motivation:** The motivation behind developing a software for virtual designing and wearing of jewelry is to provide a platform for users to design and try on jewelry virtually. In the market, we can see the increase in demand of Jewelry and with the increasing trend of online shopping, it can be difficult for users to visualize how a piece of jewelry would look on them before making a purchase. This software can solve that problem by allowing users to customize their own design and try on different types of jewelry virtually before making a purchase. This software also allows users to customize the designs, such that jewelry designers can get feedback from customers and make changes to the designs based on their preferences.

**Significance:** The significance of this project lies in its ability to provide a convenient and engaging platform for users to design and try on jewelry virtually, while also benefiting jewelry designers by increasing their sales and customer engagement. The significance of developing a software for virtual designing and wearing of jewelry using Python lies in its potential to revolutionize the way users shop for jewelry online.

* **Enhanced User Experience**: This project aims to enhance the user experience by allowing users to design and try on different types of jewelry virtually. With the help of computer vision technology, users can see how the jewelry would look on them without having to physically wear it.
* **Time and Cost Effective:** With the help of this software, users can save time and money that would have been spent on physically visiting a jewelry store. They can design and try on different jewelry designs from the comfort of their own homes.
* **Increased Sales for Jewelry Designers:** Jewelry designers can use this software to showcase their designs to a wider audience and potentially increase their sales. By allowing users to customize the designs, designers can get feedback from customers and make changes to the designs based on their preferences.
* **Customization:** This software provides users with the ability to customize their jewelry designs by changing the size, shape, and color of the jewelry. This allows users to create unique designs that are tailored to their preferences.
* **Fun and Interactive Experience:** This software provides a fun and interactive experience for users while also helping them make informed decisions when purchasing jewelry online.

**Features**: The features of the software would provide users with a seamless and engaging experience while allowing them to design and try on different types of jewelry virtually.

* **User Interface:** A user-friendly interface that allows users to easily navigate the software and access the different features.
* **Designing Module:** A module that allows users to design different types of jewelry such as necklaces, earrings, bracelets, etc. The module should have tools that allow users to customize the design by changing the size, shape, and color of the jewelry.
* **Virtual Try-On Module:** A module that allows users to try on the virtual jewelry on a model. The module could use computer vision techniques to track the user's face and superimpose the virtual jewelry on the user's face.
* **Customization Module:** A module that allows users to customize the jewelry design by changing the size, shape, and color of the jewelry. The module would use Python libraries such as NumPy and Matplotlib to generate different designs based on the user's input.
* **Save and Share Module:** A module that allows users to save their jewelry designs and share them with others. The module would store the designs in the database and allow the user to retrieve them later.
* **Multiple Platform Support:** The software should be designed to run on different platforms such as desktop, mobile devices, and web browsers.
* **Security:** The software should have secure authentication mechanisms to ensure that user data is protected.
* **Performance:** The software should be designed to provide a smooth and responsive user experience even when dealing with complex designs.

**Objectives:** The objective of developing a software for virtual designing and wearing of jewelry using Python is to provide a platform for users to design and try on jewelry virtually. The primary objective is to enhance the user experience by allowing users to visualize how the jewelry would look on them before making a purchase. The software aims to provide a convenient and cost-effective solution for users who are unable to physically visit a jewelry store. Additionally, the software can also serve as a tool for jewelry designers to showcase their designs to potential customers and get feedback from them. By allowing users to customize the designs, jewelry designers can improve their customer engagement and potentially increase their sales. The objective of this project is to create a fun and interactive experience for users while also helping them make informed decisions when purchasing jewelry online.

**References:**

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