**INTRODUCTION**

Hair, a protein comprised of keratin, is associated with masculinity and attractiveness. On the human body, there are about 5 million hair follicles. The body's hair on the scalp regulates body heat and protects the brain from heat. A healthy person has 100,000 hairs on their head, and it's typical to lose 50 to 100 of those per day. Hair loss is not a modern problem. However, compared to past times, hair and scalp-related concerns are now receiving greater attention because of things as autoimmune illness, hormonal imbalance, environmental pollutants, changed gut flora and elevated physical and mental stress. Seasonal fluctuations, poor diet, a lack of micronutrients, genetic susceptibility, and negative pharmaceutical effects are all contributing factors to stress in daily life. Even while the majority of conditions that cause hair loss are localized, some can travel. Hair transplants and prescribed medications are needed for some disorders. Some illnesses need for antibiotic treatment because they are brought on by bacterial or fungal infections. Some common conditions that lead to hair loss include alopecia, folliculitis, and psoriasis. Regular hair loss is distinct from alopecia, which results in coin-sized bald spots cover the entire scalp. Sporadic hair loss due to alopecia can include on by a variety of diseases. "A sufficient quantity of scalp hairs are lost" is the definition of hair loss. An autoimmune condition called alopecia areata causes non-scarring hair loss in distinct patches that may eventually cover the entire scalp and cause hair loss. Millions of people around the world are afflicted by the condition. Especially those with family history of alopecia areata. The process begins when the immune system of the body starts attacking the hair follicles, interfering with their regular operation and preventing the growth of new hair, which causes balding. Tracheoscopies and biopsies are frequently required because there are many potential causes of hair loss, making the diagnosis of alopecia areata difficult. However, the unpredictability of the number of tests needed for a sufficient diagnosis is one of these diagnostic approaches' shortcomings. Therefore, there is a lot of need for research into new methods for classifying and diagnosing alopecia aerate. A range of diseases and ailments can be classified and Predicted with success using machine learning