

## ABSTRACT

Breast cancer is the most prevalent form of cancer in the world. As of 2020, there were 7.8 million women alive who were diagnosed with breast cancer, and it has taken more women's lives than any other form of cancer, according to the World Health Organization (WHO). With the recent rise of artificial intelligence, breast cancer detection using deep learning techniques is getting more popular. However, creating a deep learning model for a specific task from scratch costs a lot of time and money. Transfer learning is a well-known method that can make deep learning developments more efficient by leveraging pre-trained models. Using the BreakHis dataset, this paper will compare three cutting-edge pre-trained computer vision models: DenseNet, RegNet, and BiT, in predicting malignant or benign tumor tissue from breast histopathology images to determine which model is better for that specific task. Although the DenseNet model achieves the highest score with 93.7% Area Under the ROC Curve (AUC) and 97.4% Average Precision Score (APS), the BiT model is more suitable for deployment in a real-world setting since it can predict more malignant cases correctly than the other two models with a sensitivity score of 90.79%.

**Keywords** — Breast cancer, Cancer detection, Computer vision, Deep learning, Transfer learning