**An Oral Cancer Diagnosis Using Microscopic Oral Biopsy Images Utilizing Convolutional Neural Networks**

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**Abstract** - Cancer is a disease that has been around for thousands of years. Some historians say that cancer can be dated back to 3000 B.C. in Egypt. There are multiple types of cancer, one of which is oral cancer. Oral cancer is a type of cancer that takes place in the mouth, tongue, gums, and tonsils. There are different types of oral cancer, the most common type being squamous cell carcinoma. Oral cancer can be caused by various factors, both genetic and habitual. Oral cancer can have various symptoms that are sometimes used for diagnosis. Some of these symptoms are quite generic, while other symptoms are specific to oral cancer, therefore helping in diagnosis. Several medical procedures are used in order to detect oral cancer in patients. Some of these procedures include an oral biopsy, an x-ray, and an HPV test. Artificial Intelligence is a new and emerging technology, one which is being used more and more in the healthcare and medical industries. The usage of Artificial Intelligence can lead to the early detection of oral cancer. This can lead to treatment at an early stage, which tends to have higher recovery rates. This paper proposes a simple, mobile application that utilizes microscopic oral biopsy images and Convolutional Neural Networks in order to detect oral cancer at an early stage, allowing the patient to increase their probability for recovery.