

**SIKSHA ‘O’ ANUSANDHAN**

(Deemed to be University)

Faculty of Engineering & Technology (ITER)

**Department of Computer Science and Engineering**

**Project Synopsis Form**

**SENIOR DESIGN PROJECT-2021**

**SECTION: A GROUP NO: A7**

**PROJECT TITLE: Skin Lesion Detection using Deep Feature and DNA Features**

1. **PROJECT ABSTRACT:**

Skin cancer is a major public health problem with over 123,000 newly diagnosed cases worldwide in every year. Melanoma is the deadliest form of skin cancer, responsible for over 9,000 deaths in the United States each year. Melanoma can develop anywhere on your body, in otherwise normal skin or in an existing mole that becomes cancerous. Melanoma most often appears on the face or the trunk of affected men. In women, this type of cancer most often develops on the lower legs. In both men and women, melanoma can occur on skin that hasn't been exposed to the sun.

Thus, reliable automatic melanoma screening systems would provide a great help for clinicians to detect the malignant skin lesions as early as possible.

One of the methods which have shown superior performance and efficiency in comparison to classical methods is Convolutional Neural Network(CNN). In this method three pre-trained deep models, namely AlexNet, VGG16 and ResNet-18, are used as deep feature generators. The extracted features then are used to train support vector machine classifiers. In a final stage, the classifier outputs are fused to obtain a classification.

1. **SOFTWARE, HARDWARE OR METHODS/ALGORITHMS SPECIFICATIONS:**

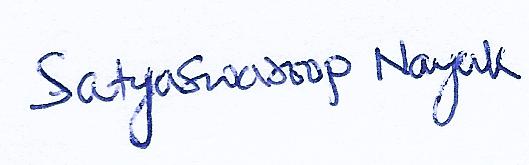
Software Requirements – Python, Jupyter Notebook

Deep Learning Techniques – Alexnet, VGG16, Resnet60, SVM

1. **NAME, REG. NO AND SIGNATURE OF GROUP MEMBERS:**



1. Abinash Acharya – 1741012195



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3) Soumya Sourav Pradhan - 1741012253

1. **APPROVAL STATUS (To be filled in by the Faculty in-charge of SDP):**

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**Project Supervisor Faculty in-charge SDP SDP Coordinator**