Report on Published Patent Automated skin diseases detection using machine learning approach Published– 19ᵗʰ August 2022

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Student/Faculty Activity	Automated skin diseases detection using machine learning approach, published in Indian patent office journal
Patent Applied by	Dr Kirtimaya Mishra, Miss Snigdha Rani, Behera and Gowri Sankar Chintapalli Professor, School of Pharmacy, ARKA JAIN University, Jamshedpur, Jharkhand 832108, India
Application No.	202241045839 A
No. Of Participant	8 Applicants

ABSTRACT

"Automated Skin Diseases Detection Using Machine Learning Approach ABSTRACT Dermatology is the area of biology that deals with the diagnosis and treatment of conditions that primarily affect the skin. Due to temperature, humidity, and other environmental conditions, the vast spectrum of dermatologic illnesses varies geographically as well as seasonally. Because of its unevenness, tone, hairiness, and other mitigating factors, human skin is one of the most unexpected and difficult surfaces to mechanically synthesise and analyse. Only a small number of studies have focused on the medical perspective of the problem, despite the fact that many studies use PC Vision techniques to identify and model human skin victimisation. Patients typically disregard early symptoms because there aren't any medical services in distant places, which could make the condition worse over time. Consequently, there is a growing need for high accuracy automatic skin disease detection systems. In order to distinguish between healthy skin and skin that has a disease, as well as to classify skin diseases into their main classes, such as melanocytic nevi, melanoma, benign keratoses-like lesions, basal cell carcinoma, actinic keratoses, vascular lesions, and dermatofibroma, we develop a multiclass deep learning model. We utilised Deep Learning to train our model. Deep Learning is a subset of machine learning, however unlike machine learning, it makes use of big datasets, which significantly reduces the number of classifiers.

The machine self-learns, divides the supplied data into levels of prediction, and provides accurate findings in a very short amount of time, encouraging and supporting the growth of dermatology. Convolutional Neural Network (CNN) is one of the most used algorithms for picture categorization thus that is the one we utilised."

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(71)Name of Applicant :
  1)Ms. Neethu Krishna
    Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, SCMS School of Engineering and Technology, Ernakulam, Kerala, Pin Code: 683582 ---------- ----------
  2)Mr. Utkarsh Arun Avalekar
  3)Dr. P Ramesh Naidu
  4)Ms. Kirti Rahul Kadam
  5)Dr Anil Trimbakrao Gaikwad
  6)Ms Snigdha Rani Behera
  7)Mr Gowri Sankar Chintapalli
  8)Dr Kirtimaya Mishra
Name of Applicant : NA
Address of Applicant : NA
(72)Name of Inventor :
  1)Ms. Neethu Krishna
Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, SCMS School of Engineering and Technology, Ernakulam, Kerala, Pin Code: 683582 --------- - ----------
  2)Mr. Utkarsh Arun Avalekar
Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, D.Y.Patil Agriculture and Technical University, Talsande, Kolhapur, Maharashtra, Pin Code: 416112 ---------- ----------
  3)Dr. P Ramesh Naidu
Address of Applicant :Assistant Professor, department of Computer Science and Engineering, Nitte Meenakshi Institute of Technology, Bangalore, Pincode: 560064 ---------- ----------
  4)Ms. Kirti Rahul Kadam
Address of Applicant :Assistant Professor, Department of Management Department , Bharati Vidyapeeth Deemed to be University institute of Management, Kolhapur, Maharashtra, Pincode:416003 ---------- ----------
  5)Dr Anil Trimbakrao Gaikwad
Address of Applicant :Associate Professor and HOD, Department of Computer Applications, Bharati Vidyapeeth Deemed to be University institute of Management, Kolhapur, Maharashtra, Pincode:416003 ---------- ----------
  6)Ms Snigdha Rani Behera
Address of Applicant :Associate Professor, Department of Pharmacy, School of Pharmacy, ARKA JAIN University, Jamshedpur, Jharkhand, Pincode: 832108 ---------- ----------
  7)Mr Gowri Sankar Chintapalli
Address of Applicant :Assistant Professor, Department of Pharmacy, School of Pharmacy, ARKA JAIN University, Jamshedpur, Jharkhand, Pin Code: 832108 ---------- ----------
  8)Dr Kirtimaya Mishra
Address of Applicant :Professor, Department of Pharmacy, School of Pharmacy, ARKA JAIN University, Jamshedpur, Jharkhand, Pin Code: 832108 ---------- ----------

(57) Abstract :
Automated Skin Diseases Detection Using Machine Learning Approach ABSTRACT Dermatology is the area of biology that deals with the diagnosis and treatment of conditions that primarily affect the skin. Due to temperature, humidity, and other environmental conditions, the vast spectrum of dermatologic illnesses varies geographically as well as seasonally. Because of its unevenness, tone, hairiness, and other mitigating factors, human skin is one of the most unexpected and difficult surfaces to mechanically synthesise and analyse. Only a small number of studies have focused on the medical perspective of the problem, despite the fact that many studies use PC Vision techniques to identify and model human skin victimisation. Patients typically disregard early symptoms because there aren't any medical services in distant places, which could make the condition worse over time. Consequently, there is a growing need for high accuracy automatic skin disease detection systems. In order to distinguish between healthy skin and skin that has a disease, as well as to classify skin diseases into their main classes, such as melanocytic nevi, melanoma, benign keratoses-like lesions, basal cell carcinoma, actinic keratoses, vascular lesions, and dermatofibroma, we develop a multiclass deep learning model. We utilised Deep Learning to train our model. Deep Learning is a subset of machine learning, however unlike machine learning, it makes use of big datasets, which significantly reduces the number of classifiers. The machine self-learns, divides the supplied data into levels of prediction, and provides accurate findings in a very short amount of time, encouraging and supporting the growth of dermatology. Convolutional Neural Network (CNN) is one of the most used algorithms for picture categorization, thus that is the one we utilised.

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