

**KLASIFIKASI KANKER PAYUDARA BERDASARKAN CITRA
MAMMOGRAM MENGGUNAKAN METODE *CONVOLUTIONAL
NEURAL NETWORK* (CNN) MODEL NASNET MOBILE**

SKRIPSI



**UIN SUNAN AMPEL
S U R A B A Y A**

Disusun Oleh
DIAH DEVI PRAMESTI
H02219004

**PROGRAM STUDI MATEMATIKA
FAKULTAS SAINS DAN TEKNOLOGI
UNIVERSITAS ISLAM NEGERI SUNAN AMPEL
SURABAYA**

2022

PERNYATAAN KEASLIAN

Saya yang bertanda tangan di bawah ini,

Nama : DIAH DEVI PRAMESTI

NIM : H02219004

Program Studi : Matematika

Angkatan : 2019

Menyatakan bahwa saya tidak melakukan plagiat dalam penulisan skripsi saya yang berjudul "KLASIFIKASI KANKER PAYUDARA BERDASARKAN CITRA MAMMOGRAM MENGGUNAKAN METODE *CONVOLUTIONAL NEURAL NETWORK* (CNN) MODEL NASNET MOBILE". Apabila suatu saat nanti terbukti saya melakukan tindakan plagiat, maka saya bersedia menerima sanksi yang telah ditetapkan.

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DIAH DEVI PRAMESTI

NIM. H02219004

LEMBAR PERSETUJUAN PEMBIMBING

Skripsi oleh

Nama : DIAH DEVI PRAMESTI
NIM : H02219004
Judul proposal skripsi : KLASIFIKASI KANKER PAYUDARA BERDASARKAN
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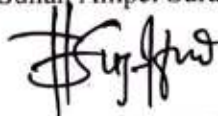
Yuniar Farida, M.T
NIP. 197905272014032002

Pembimbing II



Dr. Dian Candra Rini Novitasari, M.Kom
NIP. 198511242014032001

Mengetahui,
Ketua Program Studi Matematika
UIN Sunan Ampel Surabaya



Yuniar Farida, M.T
NIP. 197905272014032002

PENGESAHAN TIM PENGUJI SKRIPSI

Skripsi oleh

Nama : DIAH DEVI PRAMESTI
NIM : H02219004
Judul Skripsi : **KLASIFIKASI KANKER PAYUDARA BERDASARKAN CITRA MAMMOGRAM MENGGUNAKAN METODE CONVOLUTIONAL NEURAL NETWORK (CNN) MODEL NASNET MOBILE**

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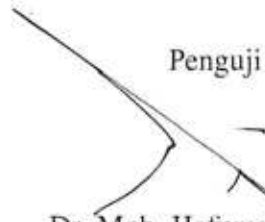
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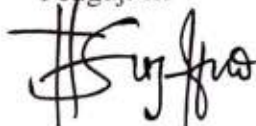
Nurissaidah Ulinnuha, M.Kom
NIP. 199011022014032004

Penguji II



Dr. Moh. Hafiyusholih, M.Si
NIP. 198002042014031001

Penguji III



Yuniar Farida, M.T
NIP. 197905272014032002

Penguji IV



Dr. Dian Candra Rini Novitasari, M.Kom
NIP. 198511242014032001

Mengetahui,

Dekan Fakultas Sains dan Teknologi
Sunan Ampel Surabaya




Dr. A. Hamdani, M.Pd
NIP. 195707312000031002



UIN SUNAN AMPEL
SURABAYA

KEMENTERIAN AGAMA
UNIVERSITAS ISLAM NEGERI SUNAN AMPEL SURABAYA
PERPUSTAKAAN

Jl. Jend. A. Yani 117 Surabaya 60237 Telp. 031-8431972 Fax.031-8413300
E-Mail: perpus@uinsby.ac.id

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NIM : H02219004
Fakultas/Jurusan : SAINTEK / MATEMATIKA
E-mail address : diahdevi 92@gmail.com

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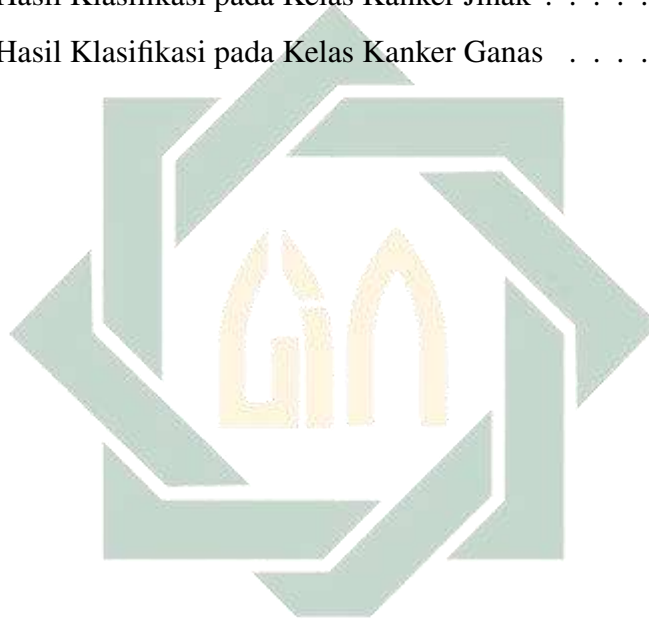
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ABSTRAK

KLASIFIKASI KANKER PAYUDARA BERDASARKAN CITRA MAMMOGRAM MENGGUNAKAN METODE *CONVOLUTIONAL* *NEURAL NETWORK* (CNN) MODEL NASNET MOBILE

Di Indonesia, kanker payudara merupakan jenis kanker yang memiliki tingkat kematian tertinggi, oleh karena itu penting untuk melakukan pemeriksaan dini, pemeriksaan klinis, dan skrining menggunakan mammografi. Penelitian ini dilakukan dengan tujuan mengklasifikasikan sel-sel kanker payudara berdasarkan citra *mammogram*. Dalam penelitian ini, metode yang digunakan adalah *Convolutional Neural Network* (CNN) dengan menggunakan model *NasNet Mobile* untuk mengklasifikasikan tiga kategori, yaitu normal, kanker jinak, dan kanker ganas. Data akan dilakukan preprocessing untuk menjadi inputan pada *NasNet Mobile*. Metode *NasNet Mobile* memiliki kemampuan sistem untuk menangani penambahan beban yang diberikan, sehingga dapat menghasilkan karakteristik data yang lebih detail dan memiliki kemampuan deteksi yang lebih baik. Hasil dari penelitian ini menunjukkan bahwa model yang dikembangkan memiliki rata-rata nilai akurasi sebesar 95,84%, sensitivitas 97,18% serta spesifitas 96,58%. Penelitian ini dapat menjadi referensi dan membantu ahli radiologi dalam mengambil keputusan yang lebih baik dalam diagnosis kanker payudara. Dengan demikian, penelitian ini memberikan kontribusi yang signifikan dalam meningkatkan pemahaman dan penggunaan citra *mammogram* dalam klasifikasi kanker payudara, serta memberikan dukungan kepada para ahli radiologi dalam proses pengambilan keputusan yang lebih efektif.

Kata kunci: Citra *Mammogram*, CNN, *Deep Learning*, Nasnet Mobile, Kanker Payudara

ABSTRACT

CLASSIFICATION OF BREAST CANCER BASED ON MAMMOGRAM IMAGE USING *CONVOLUTIONAL NEURAL NETWORK* (CNN) METHOD OF NASNET MOBILE MODEL

In Indonesia, breast cancer is a type of cancer that has the highest mortality rate, therefore it is important to carry out early examinations, clinical examinations and screening using mammography. This research was conducted with the aim of classifying breast cancer cells based on *mammogram* images. In this study, the method used is *Convolutional Neural Network* (CNN) using the *NasNet Mobile* model to classify three categories, namely normal, benign cancer, and malignant cancer. The data will be preprocessed to become input on *NasNet Mobile*. The *NasNet Mobile* method has the capability of the system to handle the added load given, so that it can produce more detailed feature data and has better detection capabilities. The results of this study indicate that the developed model has an average accuracy value of 95.84%, a sensitivity of 97.18% and a specificity of 96.58%. This research can be a reference and help radiologists make better decisions in diagnosing breast cancer. Thus, this research makes a significant contribution in improving the understanding and use of *mammogram* images in breast cancer classification, as well as providing support to radiologists in a more effective decision-making process.

Keywords: Breast Cancer, CNN, Deep Learning, Nasnet Mobile, Mammogram Image

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