**LITERATURE SURVEY**

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| SNO | TITLE OF THE PAPER | NAME OF  THE JOURNAL | AUTHOR | YEAR  OF  PUBLISHING | ACHIEVEMENTS | DRAWBACKS |
| 1. | **AI-based localization and classification of skin disease with erythema** | [*Scientific Reports*](https://www.nature.com/srep) **volume** | [Ha Min Son](https://www.nature.com/articles/s41598-021-84593-z#auth-Ha_Min-Son), [Wooho Jeon](https://www.nature.com/articles/s41598-021-84593-z#auth-Wooho-Jeon), [Jinhyun Kim](https://www.nature.com/articles/s41598-021-84593-z#auth-Jinhyun-Kim), [Chan Yeong Heo](https://www.nature.com/articles/s41598-021-84593-z#auth-Chan_Yeong-Heo), [Hye Jin Yoon](https://www.nature.com/articles/s41598-021-84593-z#auth-Hye_Jin-Yoon), Ji-Ung Park &  [Tai-Myoung Chung](https://www.nature.com/articles/s41598-021-84593-z#auth-Tai_Myoung-Chung) | 2021 | this method provides a solution to classify multiple diseases within a single image. With higher quality and a larger quantity of data, it will be viable to use state-of-the-art models to enable the use of CAD in the field of dermatology. | This model only identifies the physical visible damage and not of the internal or the interior damage. |
| 2. | AI-based localization and classification of skin disease with erythema | [*Scientific Reports*](https://www.nature.com/srep) **volume** | [H. Son](https://www.semanticscholar.org/author/H.-Son/2034199880), [Wooho Jeon](https://www.semanticscholar.org/author/Wooho-Jeon/2051999696), [Jinhyun Kim](https://www.semanticscholar.org/author/Jinhyun-Kim/2116515887), [C. Heo](https://www.semanticscholar.org/author/C.-Heo/144628075), [H. Yoon](https://www.semanticscholar.org/author/H.-Yoon/2113738070), [Ji-Ung Park](https://www.semanticscholar.org/author/Ji-Ung-Park/2116009765), [T. Chung](https://www.semanticscholar.org/author/T.-Chung/2053402366) | 2021 | this study shows that CAD may also be a viable option in dermatology by presenting a novel method to sequentially combine accurate segmentation and classification models. Given an image of the skin, we decompose the image to normalize and extract high-level features. | This model only identifies the physical visible damage and not of the internal or the interior damage. |
| 3 | AI-based localization and classification of skin disease with erythema | researchgate | [**Ha Min Son**](https://www.researchgate.net/scientific-contributions/Ha-Min-Son-2185704524) | 2021 | This study shows that CAD may also be a viable option in dermatology by presenting a novel method to sequentially combine accurate segmentation and classification models. Given an image of the skin, we decompose the image to normalize and extract high-level features. Using a neural network-based segmentation model to create a segmented map of the image, we then cluster sections of abnormal skin and pass this information to a classification model | this classification model is less accurate  a baseline model trained without segmentation, while also being able to classify multiple diseases within a single image. |
| 4 | **AI-based localization and classification of skin disease with erythema** | en.x-mol | Ha Min Son  , Wooho Jeon  , Jinhyun Kim , Chan Yeong Heo  , Hye Jin Yoon  , Ji-Ung Park , Tai-Myoung Chung | 2021 | classify each cluster into different common skin diseases using another neural network model. Our segmentation model achieves better performance compared to previous studies, and also achieves a near-perfect sensitivity score in unfavorable conditions. Our classification model is more accurate than a baseline model trained without segmentation, while also being able to classify multiple diseases within a single image. This improved performance may be sufficient to use CAD in the field of dermatology. | a neural network-based segmentation model to create a segmented map of the image, we then cluster sections of abnormal skin and pass this information to a classification model. |
| 5 | AI-based localization and classification of skin disease with erythema | nature | [Chan Yeong Heo](https://typeset.io/authors/chan-yeong-heo-4bsa7dgfan), [Hye Jin Yoon](https://typeset.io/authors/hye-jin-yoon-2on2l82747), [Ji Ung Park](https://typeset.io/authors/ji-ung-park-4284e1m8rv), [Tai Myoung Chung](https://typeset.io/authors/tai-myoung-chung-431iq8d4cn) | 2021 | This method is to classify each cluster into different common skin diseases using another neural network model. Our segmentation model achieves better performance compared to previous studies, and also achieves a near-perfect sensitivity score in unfavorable conditions. Our classification model is more accurate than a baseline model trained without segmentation, while also being able to classify multiple diseases within a single image. This improved performance may be sufficient to use CAD in the field of dermatology. | With higher quality and a larger quantity of data, it will be viable to use state-of-the-art models to enable the use of CAD in the eld of dermatology in small quality it is not viable |