Identifying Melanoma
CNN Image Classification

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Agenda

- Business Understanding
- Dataset
- Modeling
- Conclusions and Recommendations

AAD American Academy of Dermatology Association

WHAT'S THE BIG DEAL?

... AND MELANOMA IS THE MOST DANGEROUS TYPE OF SKIN CANCER YOU CAN GET

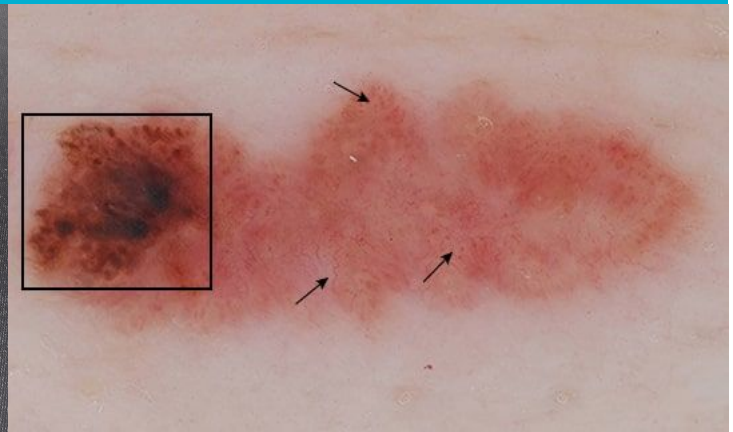
ABOUT **76,100** PEOPLE WILL BE DIAGNOSED WITH MELANOMA IN THE U.S. IN 2014,

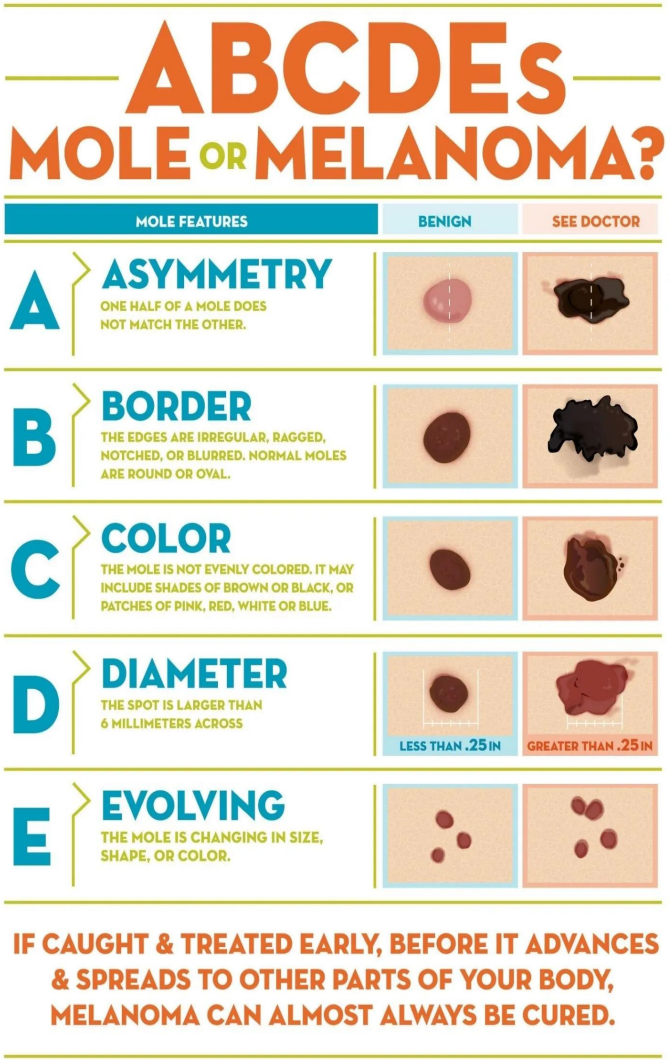
AND **9,700** PEOPLE WILL DIE

Business Understanding

- 9,500+ skin cancer diagnoses per day
- 20% develop skin cancer in lifetime
- 99% survival rate

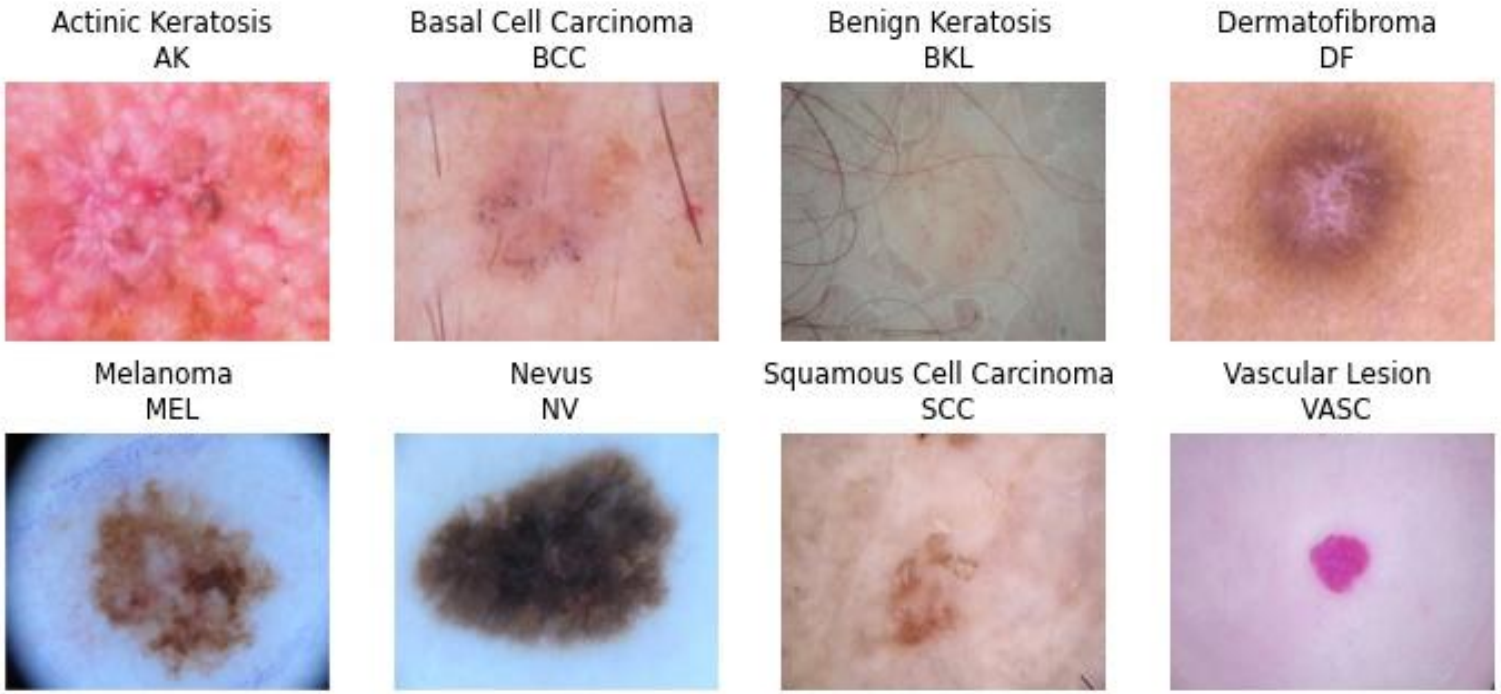
Stakeholder: Dermatoscope manufacturers



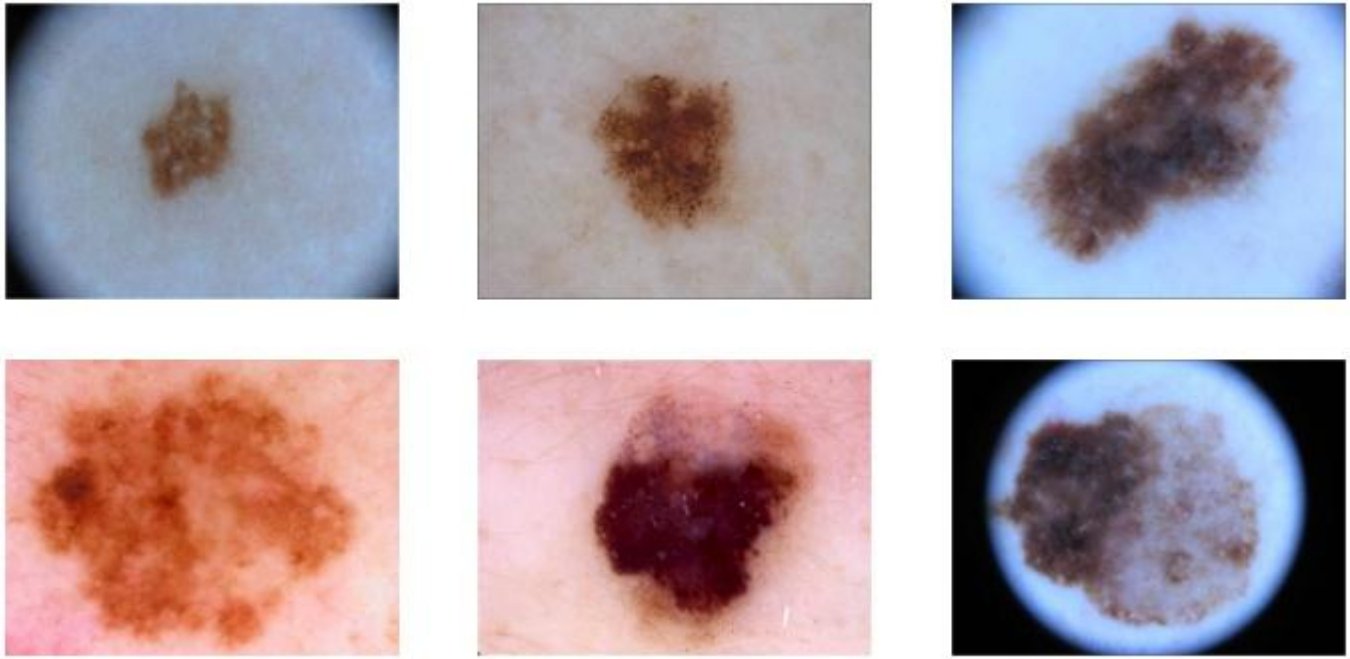


Dataset

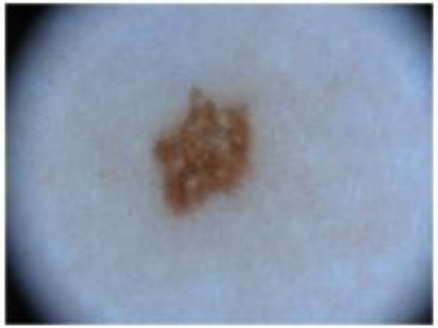
International Skin Imaging Collaboration (ISIC) 2019 Challenge
25,331 photos
8 diagnoses



Focus



Nevus



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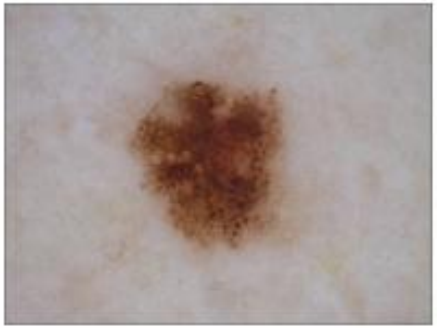

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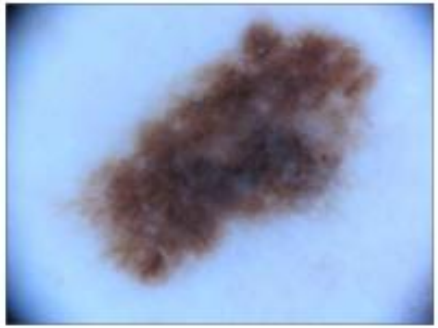
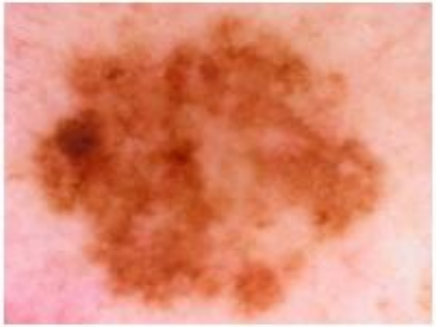
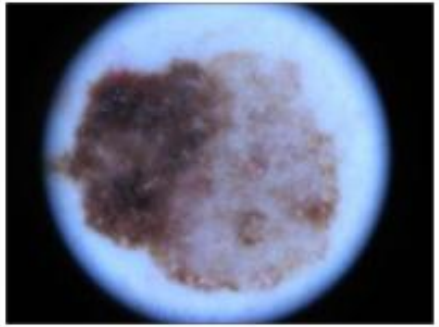


Melanoma



Melanoma

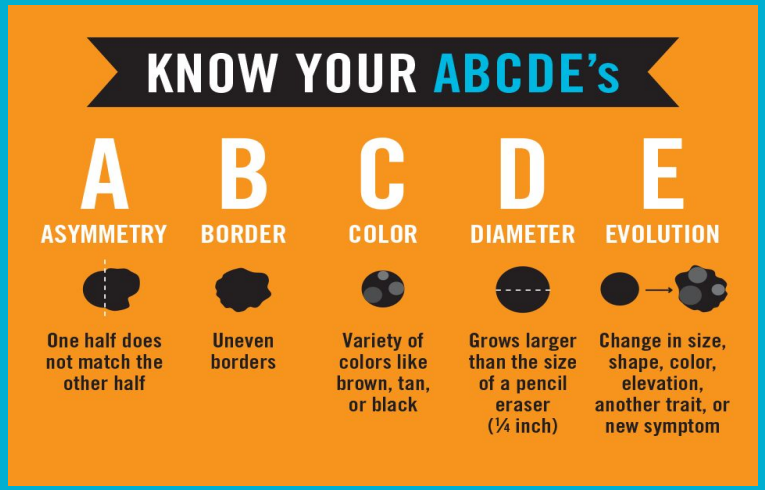
Melanoma

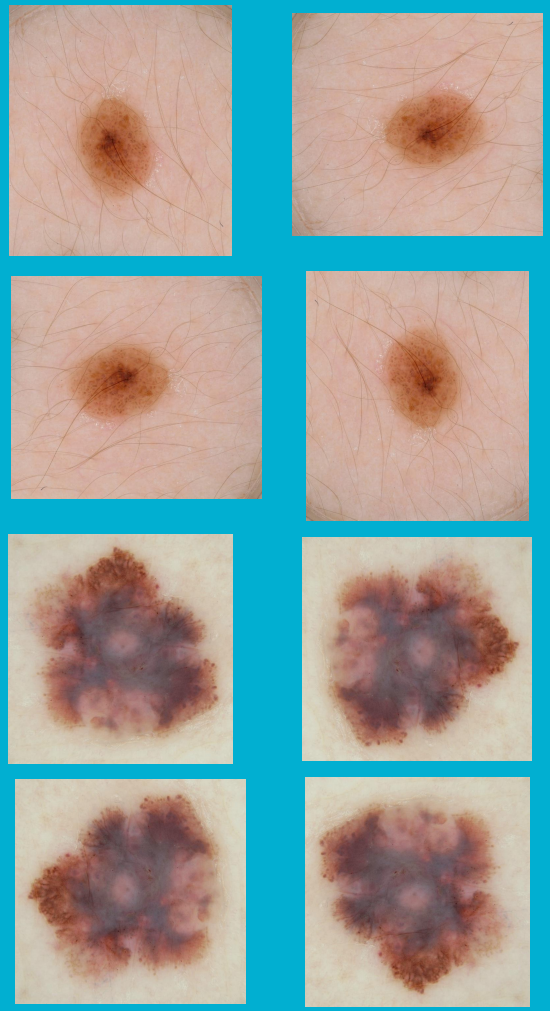


Modeling

Final Accuracy: 78.1%

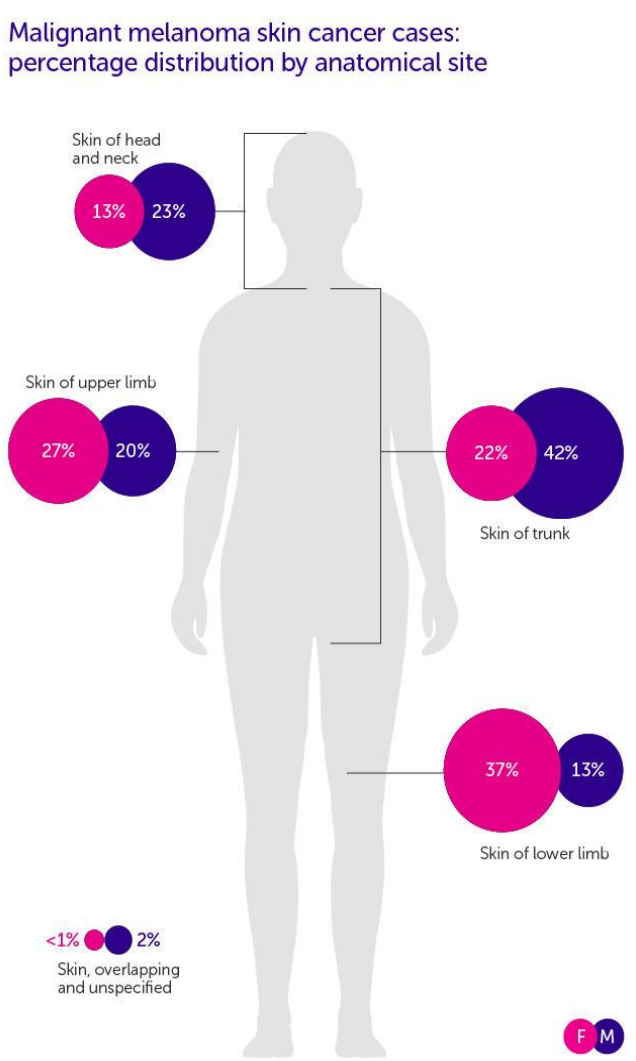
Final Recall: 83.7%





Next Steps

- Multiple lesions in one image
- Account for different types of lesions
- Sex, age, skin cancer history and lesion location



Questions?

Contact

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GitHub: https://github.com/evanstaffen/Melanoma-Identification-with-CNNs