

<b>BUSINESS CASE</b>	
<b>Proposed Project</b>	SPOT
<b>Date Updated</b>	February 23, 2022
<b>Background</b>	For our project we are developing a web application that detects whether a user has a skin disease. Our web app will use AI image recognition to process photos sent by the user to analyze. Today is the era that the application of convolution algorithms on image recognition has become mature, and therefore we choose convolution as our primary algorithm and this should provide us with a much higher accuracy rate.
<b>Business Need/ Opportunity</b>	In today's world, there are so many people suffering from skin cancer/ skin diseases. Our web app's aim is to help people who have no easy access/ trip to a hospital and also for people who want a quick analysis of what could be the blemish on their skin. Detecting a skin disease at its earliest stage is important as it increases the chances of curing it. Our project also fulfills one of the 17 goals of the UN: good health and well-being. Also there are few applications out in the market that provide such services, however, according to Memorial Sloan Kettering Cancer Center (MSK) dermatologists Allan Halpern and Veronica Rotemberg reported that the overall accuracy of the apps that were evaluated was only 59%.
<b>Options</b>	<ul style="list-style-type: none"> <li>- Do the project</li> <li>- Do nothing</li> <li>- Pick another project</li> </ul>
<b>Cost-Benefit Analysis</b>	
[This section contains the detailed costs and benefits of each option listed in the previous section. The costs may include considerations such as financial expenditures, the amount of time required, possible risks, and the potential for reduced quality. The benefits may include the potential of increased sales, market share, and brand recognition, and the reduction of errors and ongoing costs. Each option should be clearly identified and listed separately.]	

Do the project

- Benefit
  - one of our members has a concurrent class focussing on AI to which their work in that class is immediately beneficial to the group
  - we are working in a competitive space where not only can we gage the needs of users a little easier by looking at competing products to see what can be improved, even in the event of failure of the project there is still a chance that our research and development can still help the realm of cancer research
- Cost
  - there may be a monetary cost of buying an external IaaS server to run our back end code/api
  - not every member is versed in the difficult facets of the project (AI)
  - It may be really hard to find users to test this with

Do Nothing

- Benefit
  - more time to work on other classes
- Cost
  - failure of the capstone
  - loss of tuition money

Pick another Project

- Benefit
  - another project opens up possibilities to projects where everyone know how to do each others jobs
  - possible better user testing opportunities
- Cost
  - possibly not enough time to switch gears to another project

**Recommendation**

[This section contains the recommended option from the previous section.]

We would recommend to do this project because similar applications on the market are having low accuracy rate and this is a life critical issue. We are willing to make this project an open-source and free software such that people use our service at no cost.