Project topic

**Colour Changing Materials (Biomimicing Chameleon)**

Week 1

* To study how Morpho butterfly and Chameleon change their Colour
* Can we take inspiration from that for our project

Week 2

* For chameleon, its crystal layer under the skin, and for butterfly, its wing structure
* So, now the task is to study about *Light-Matter* interaction. (Diffraction, Polarisation, Interference…)
* Is there any material dependence for butterfly wing structure
* What is Plumage reflectance

Week 3

* Why butterflies can show a range of blue or green colors
* Study antireflective surfaces
* Methods of getting an iridescent colored surface
* What is the exact interaction in case of a chameleon with crystals

Week 4

* So now it is clear that Chameleons camouflage by changing the spacing between Iridiphores
* Its also clear that its application of Bragg’s law
* How we can create this crystal structure
* How changing spacing can be achieved

Week 5

* Project work is concluded, Can check the Final slides
* Part we are leaving – How to deploy computer vision and AI algorithm that will provide us required spacing between crystals that will help material to camouflage