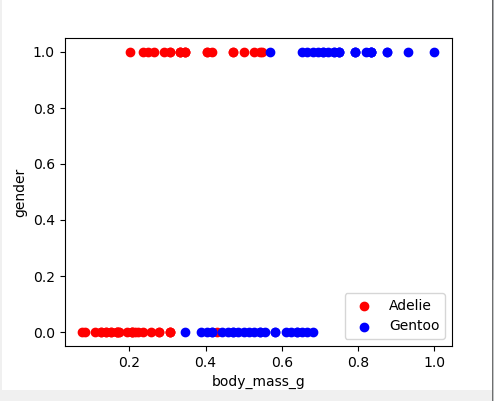
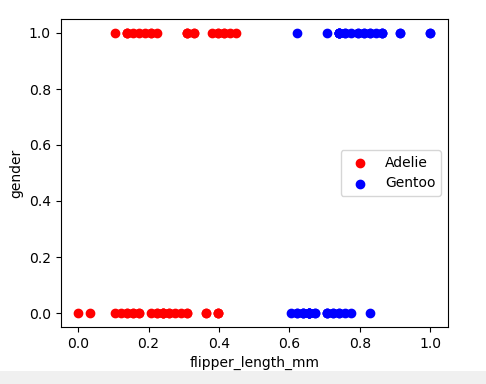
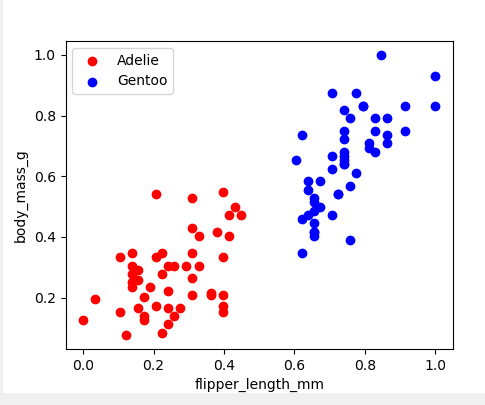
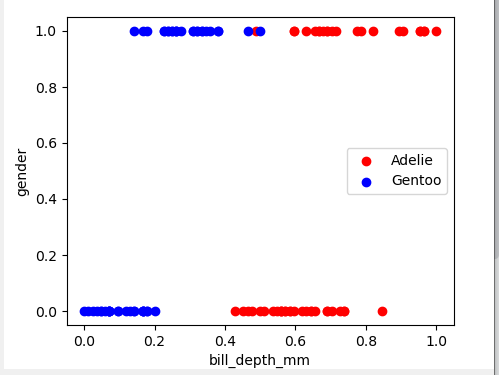
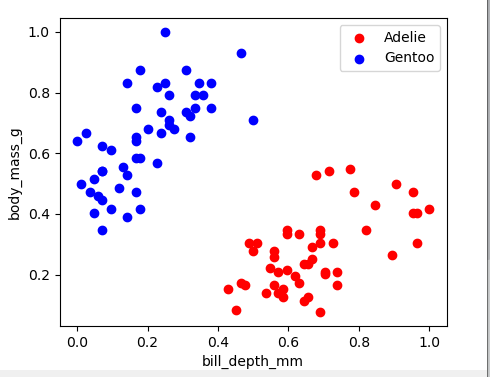
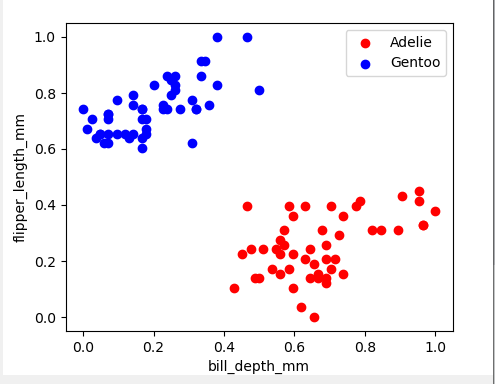
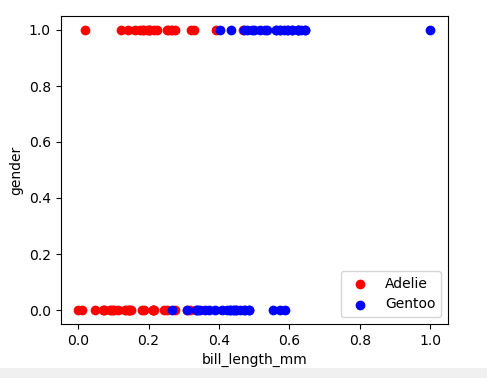
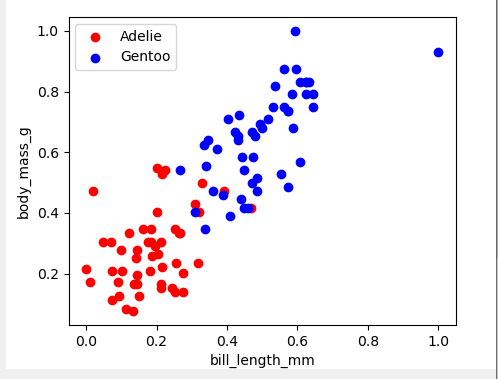
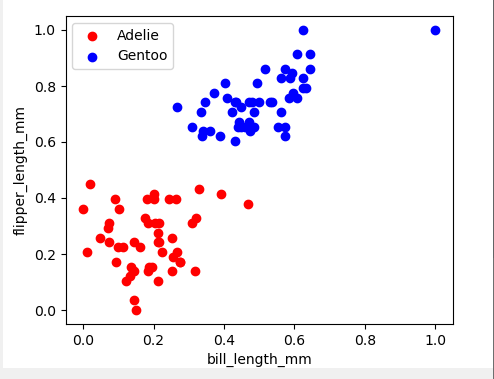
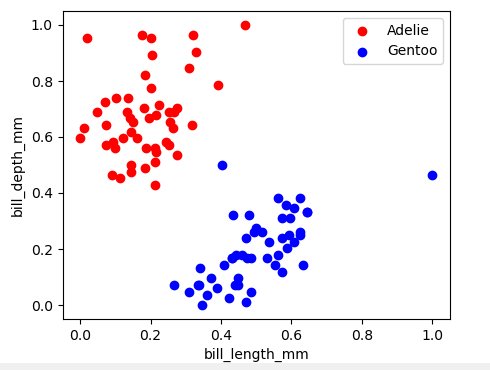
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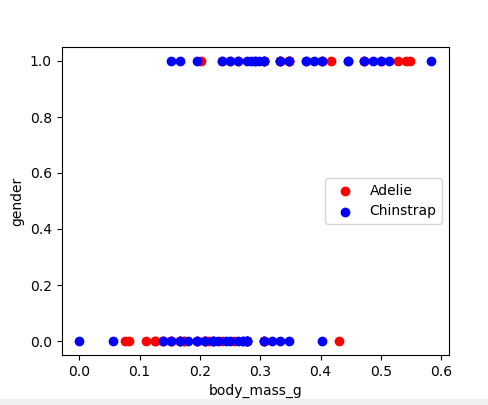
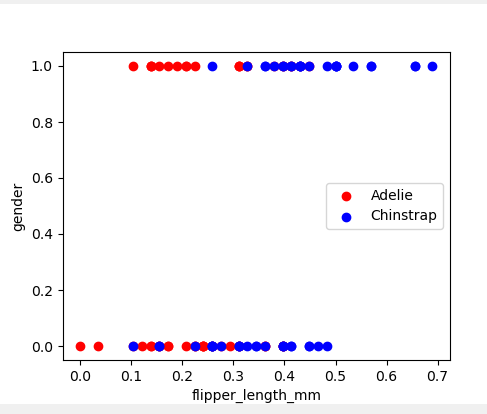
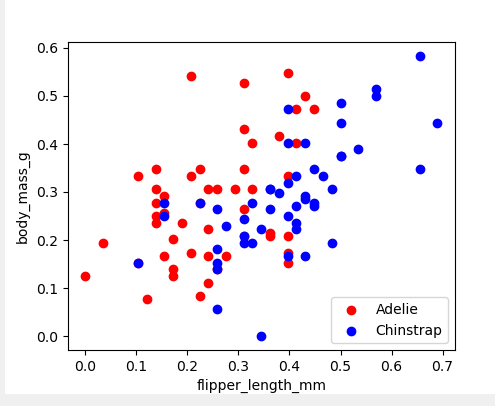
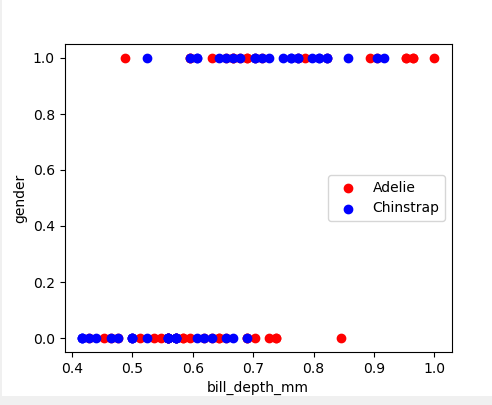
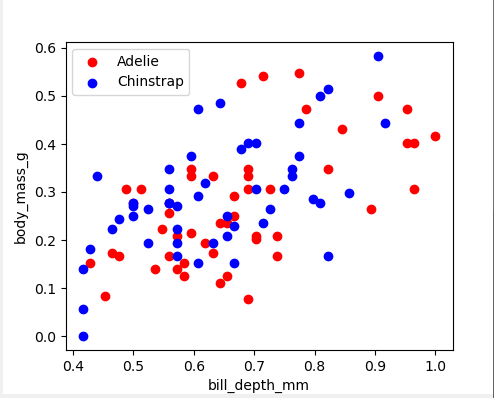
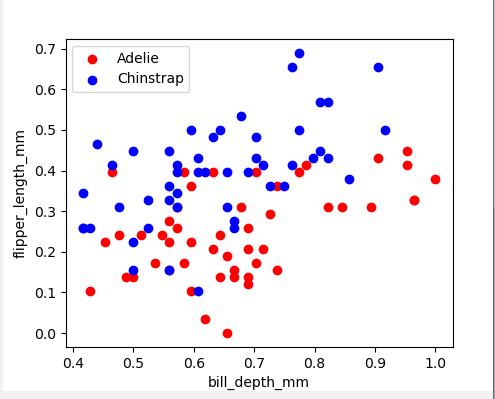
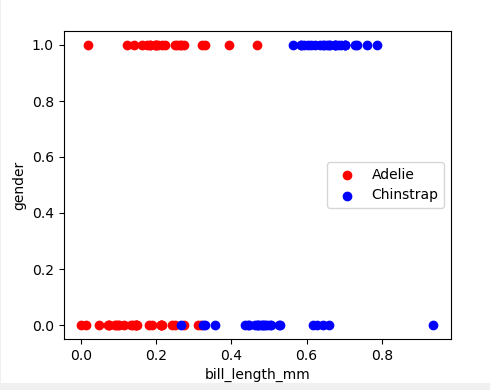
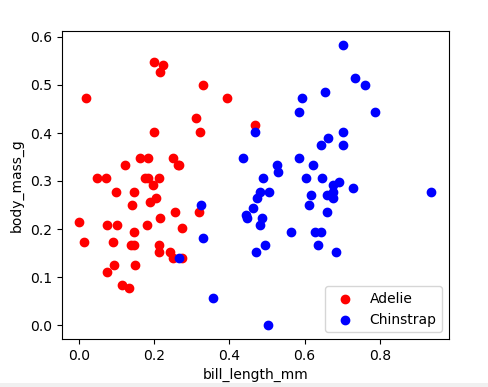
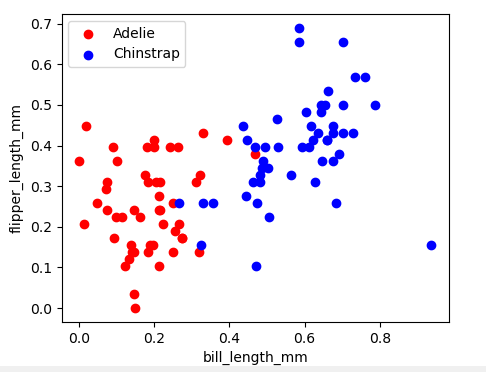
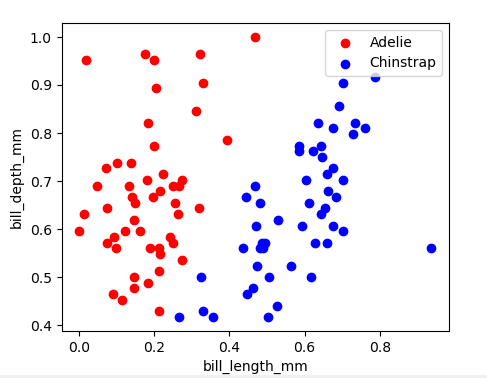
1. Visualization
2. Error Values
3. Decision Boundary Plot
4. Conclusion

Visualization:

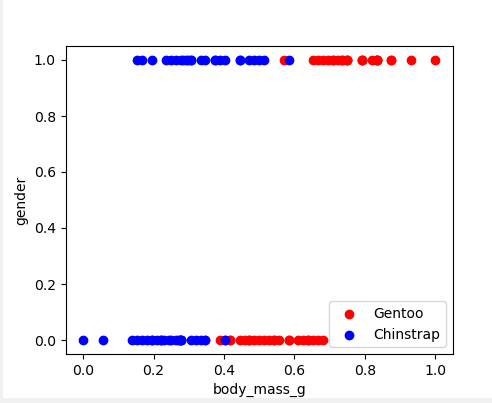
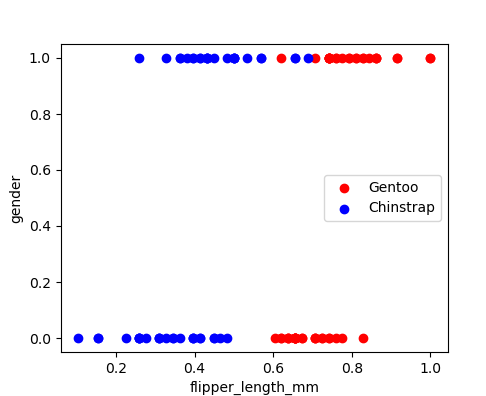
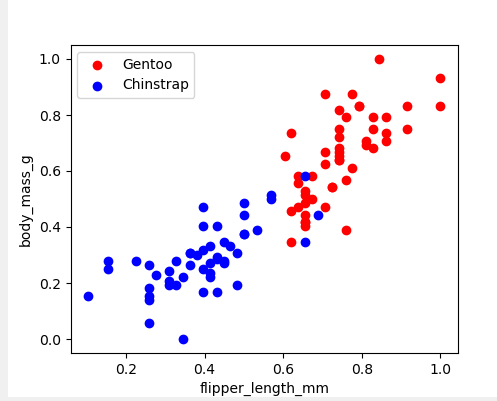
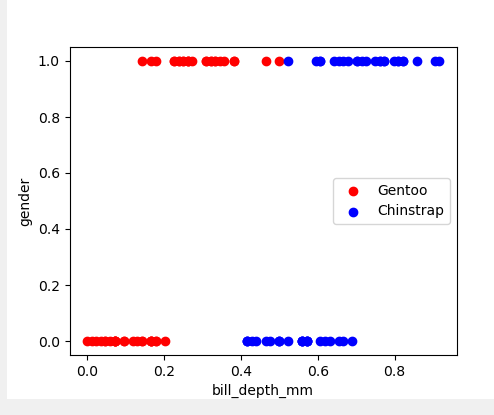
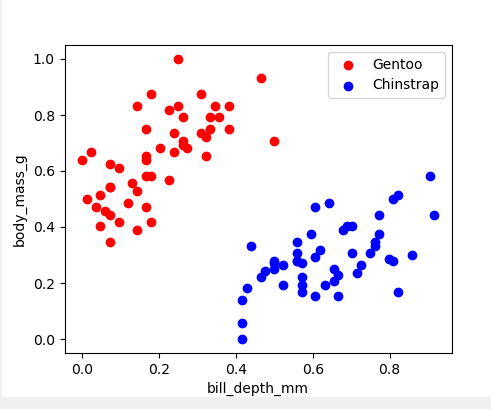
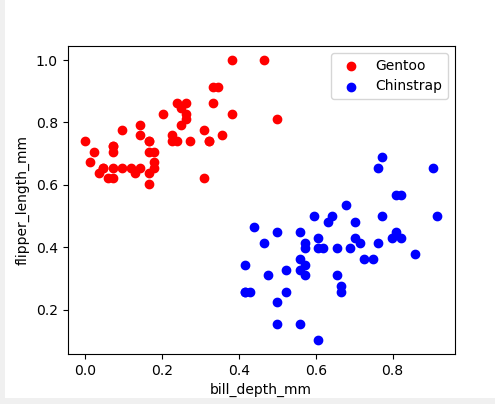
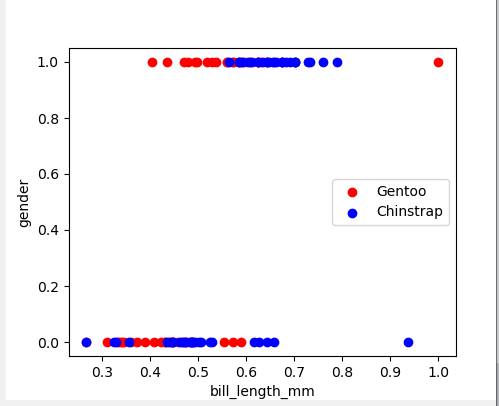
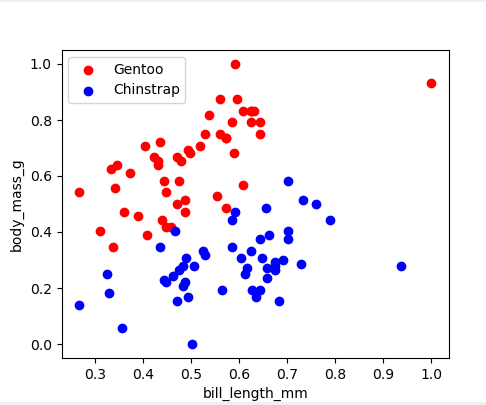
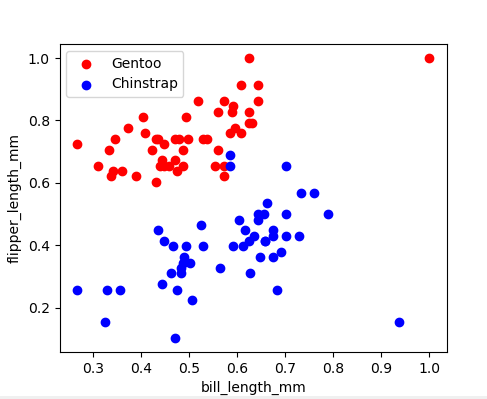
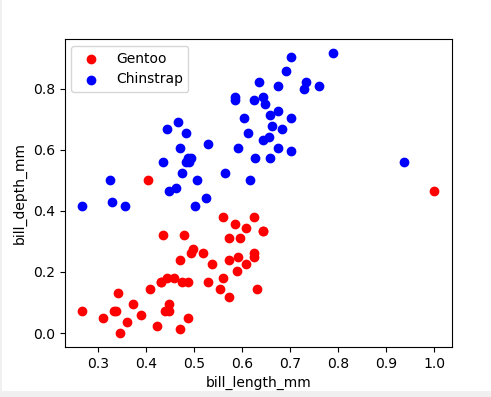
For Adelie and Gentoo



For Adelie and Chinstrap



For Gentoo and Chinstrap



Error Values : (100 epochs / Lr 0.01 / mse : 0.2 / bias : not )

Values may change because weights random initializations

* Adelie and Chinstrap

| Bill length and bill depth | 0.05 |
| --- | --- |
| Bill length and flipper length | 0.015 |
| Bill length and body mass | 0.067 |
| Bill length and gender | 0.067 |
| bill depth and flipper length | 0.1 |
| bill depth and body mass | 0.3 |
| bill depth and gender | 0.3 |
| flipper length and body mass | 0.283 |
| flipper length and gender | 0.3 |
| body mass and gender | 0.3 |

* Adelie and Gentoo

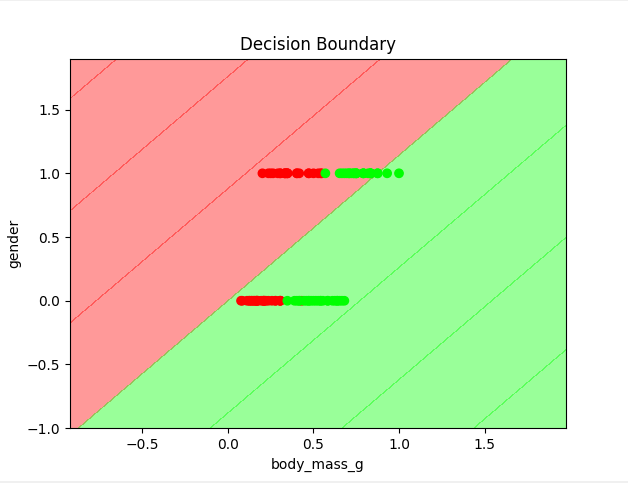
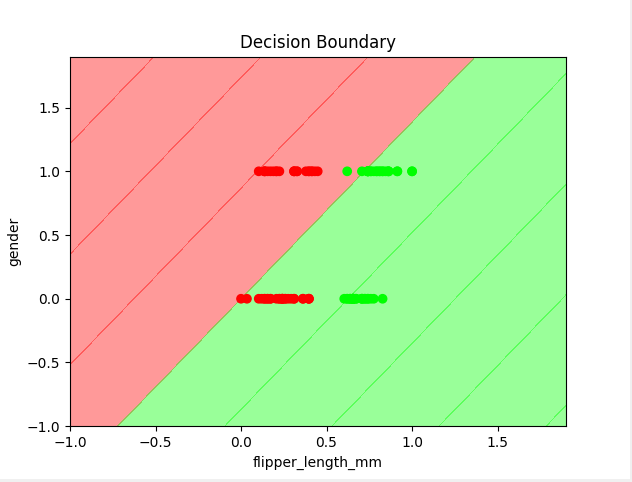
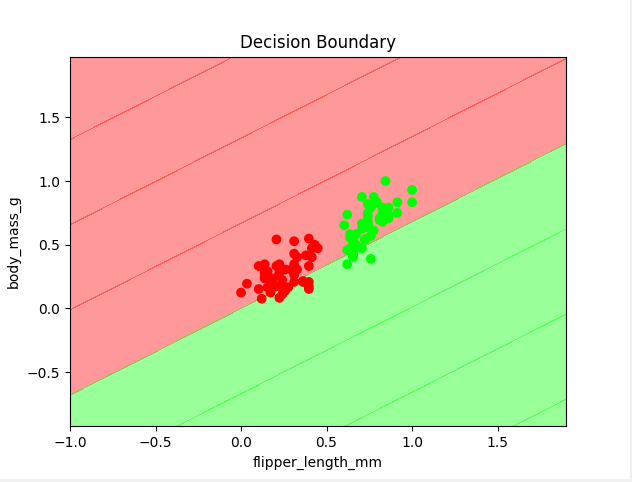
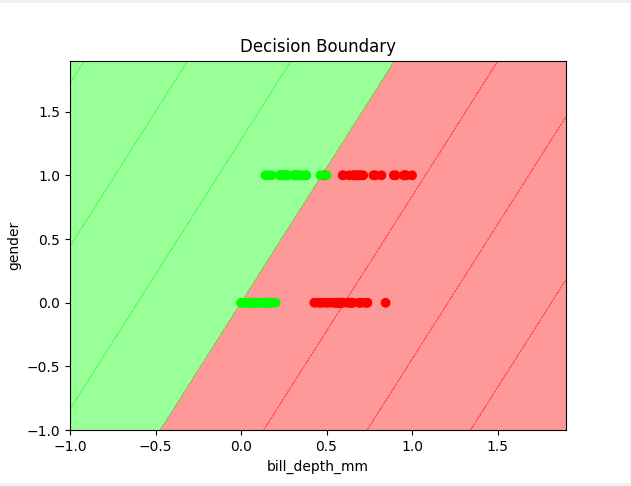
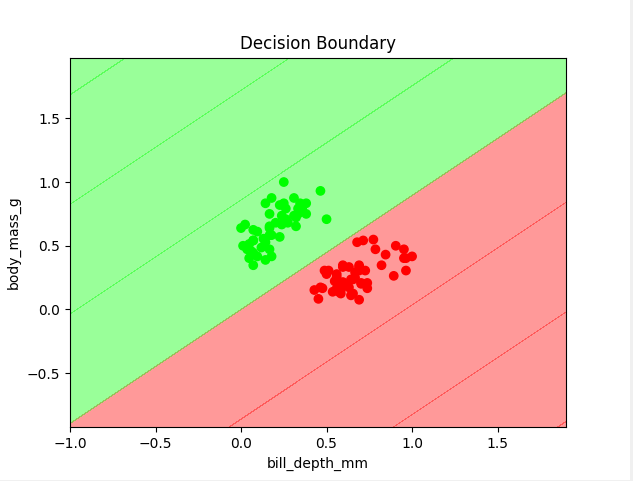
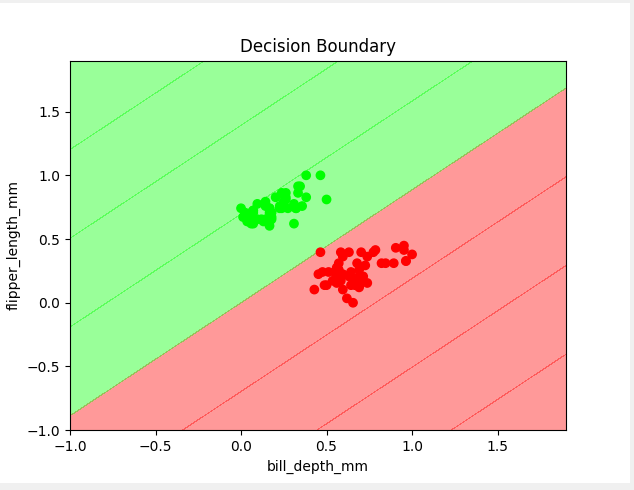
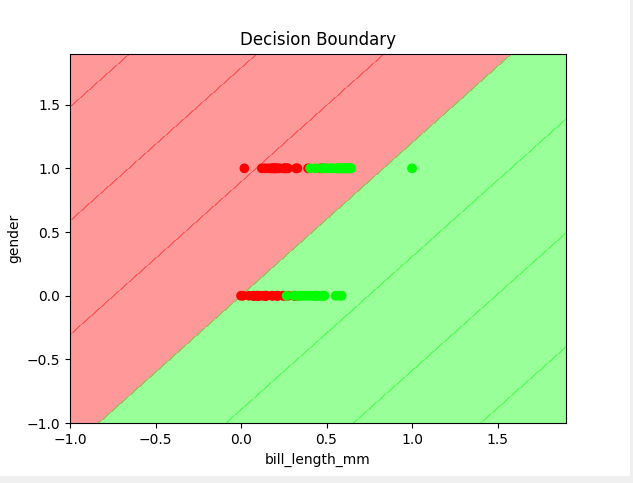
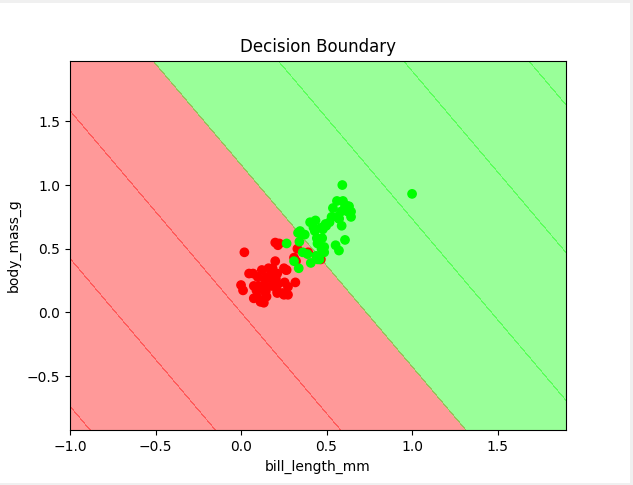
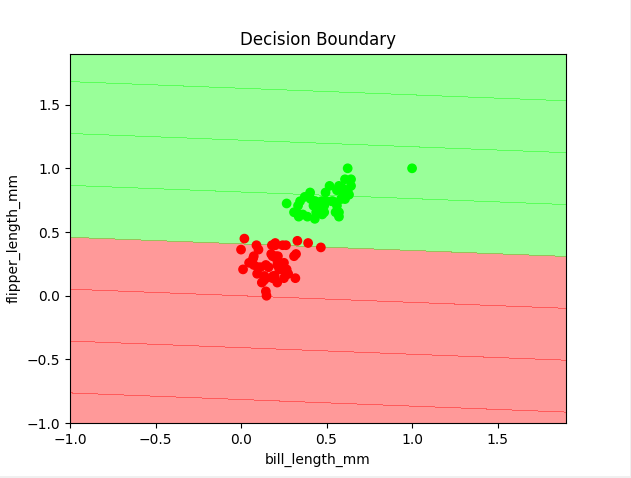
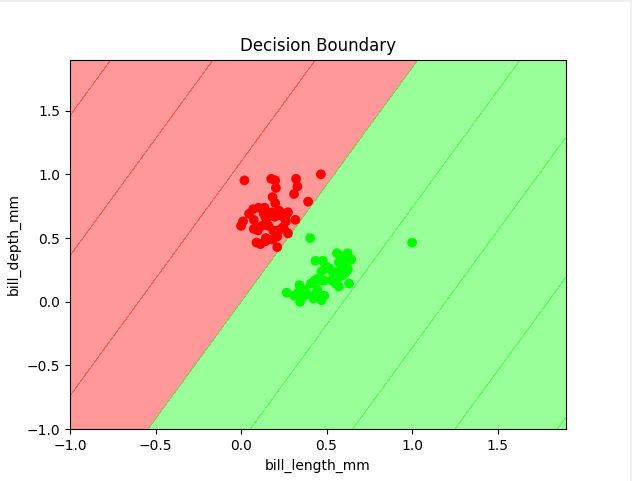
| Bill length and bill depth | 0.016 |
| --- | --- |
| Bill length and flipper length | 0.316 |
| Bill length and body mass | 0.016 |
| Bill length and gender | 0.3 |
| bill depth and flipper length | 0 |
| bill depth and body mass | 0.016 |
| bill depth and gender | 0.075 |
| flipper length and body mass | 0.0183 |
| flipper length and gender | 0.325 |
| body mass and gender | 0.03 |

* Chinstrap and Gentoo

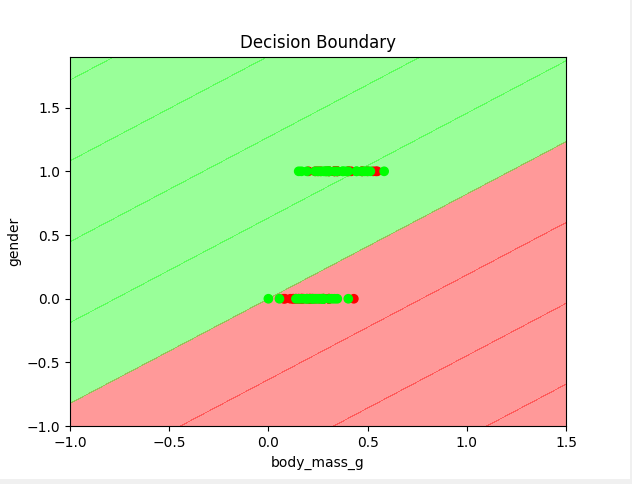
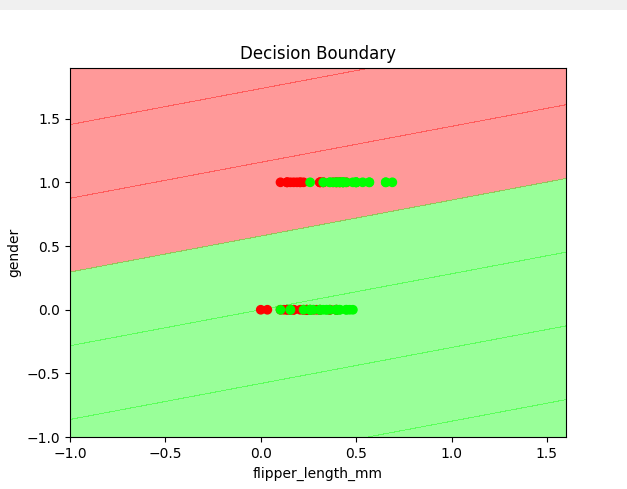
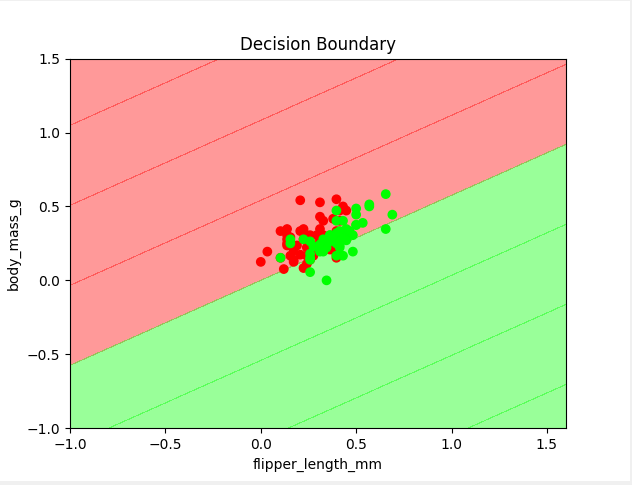
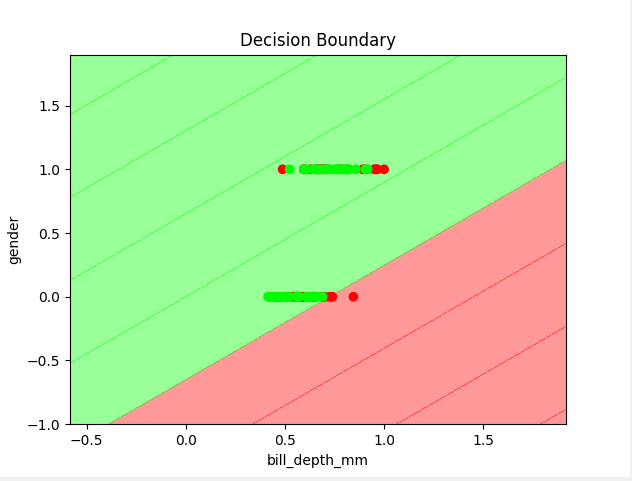
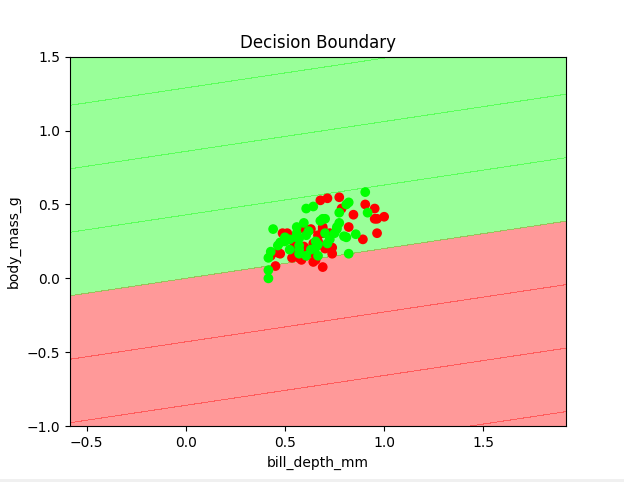
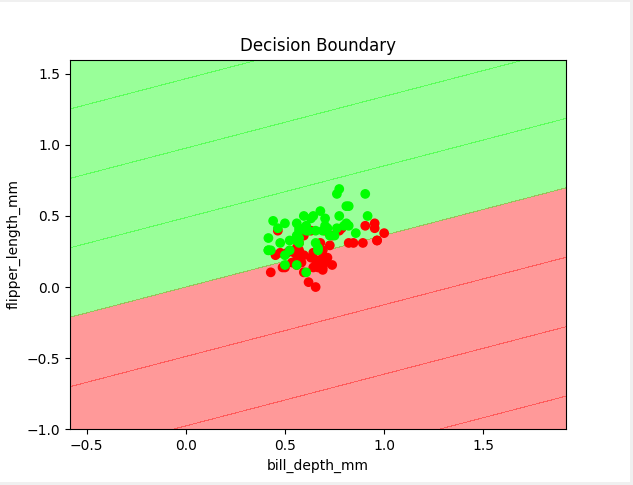
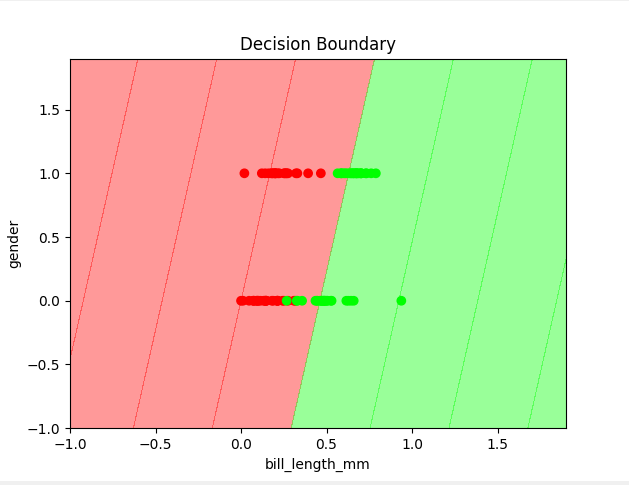
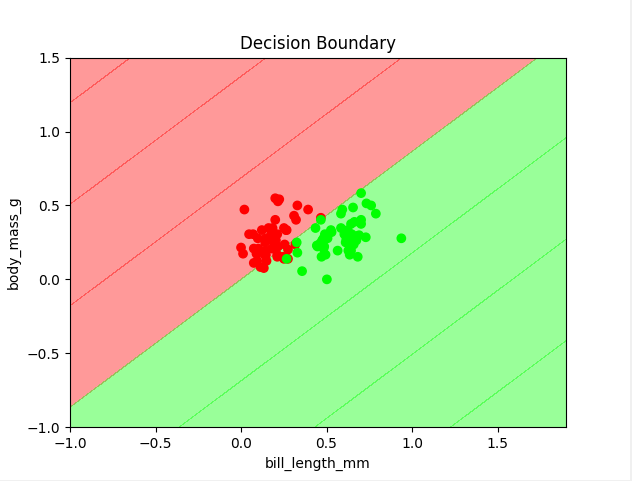
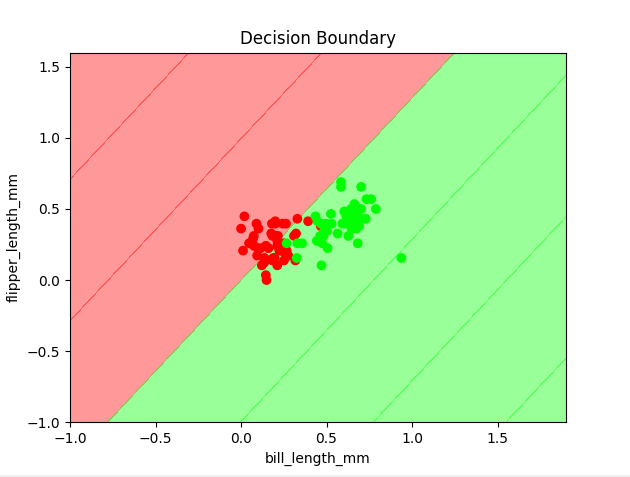
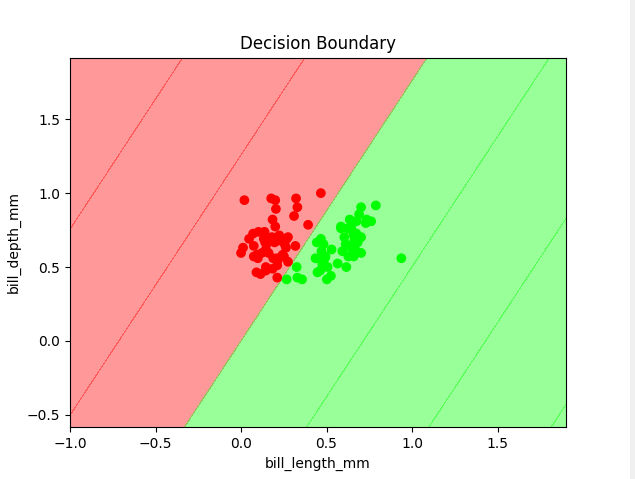
| Bill length and bill depth | 0 |
| --- | --- |
| Bill length and flipper length | 0 |
| Bill length and body mass | 0 |
| Bill length and gender | 0 |
| bill depth and flipper length | 0 |
| bill depth and body mass | 0 |
| bill depth and gender | 0 |
| flipper length and body mass | 0 |
| flipper length and gender | 0 |
| body mass and gender | 0 |

Decision Boundary Plot :

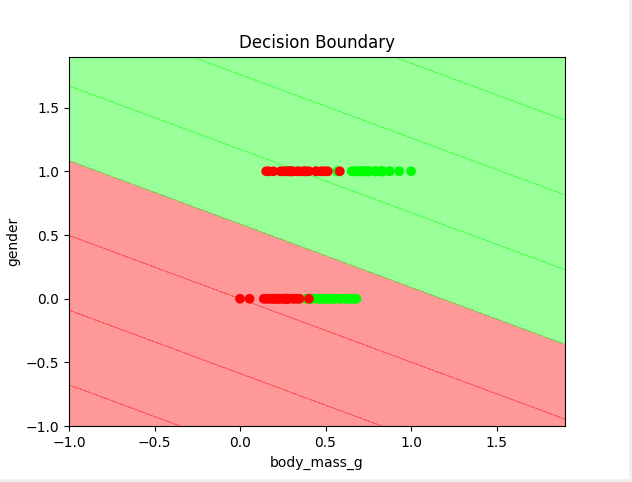
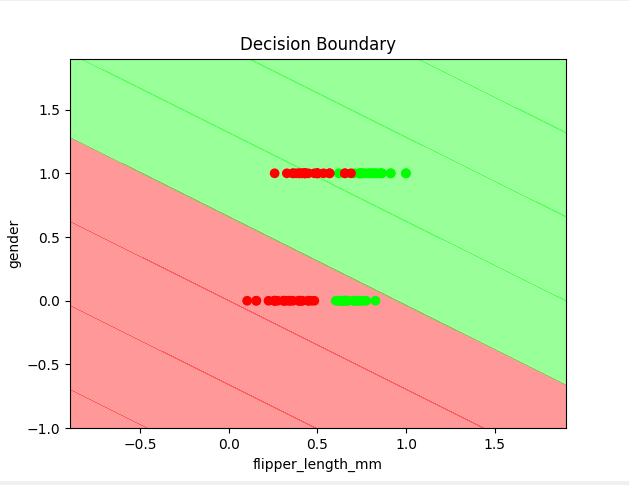
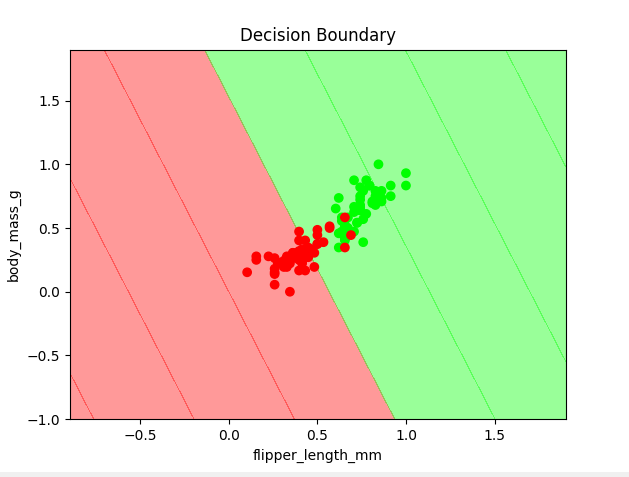
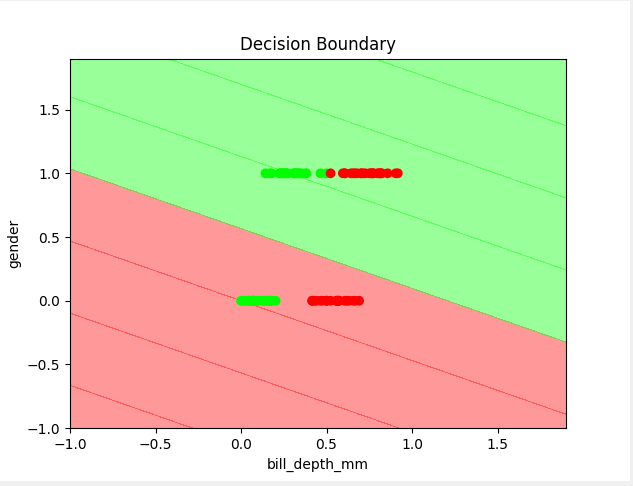
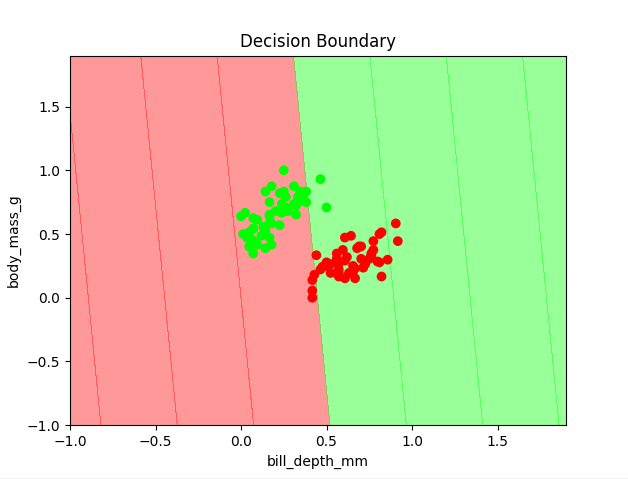
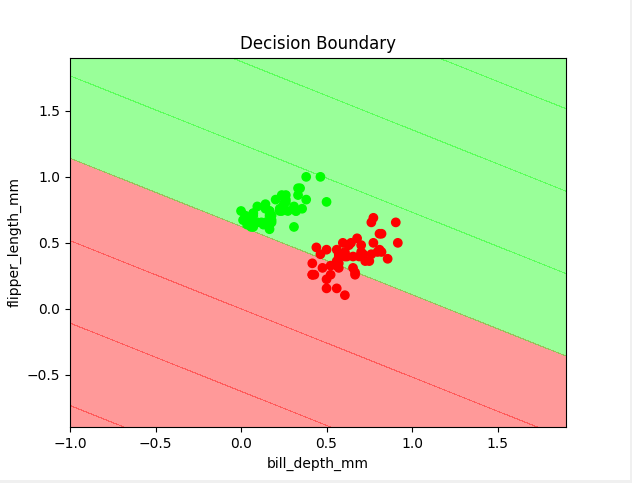
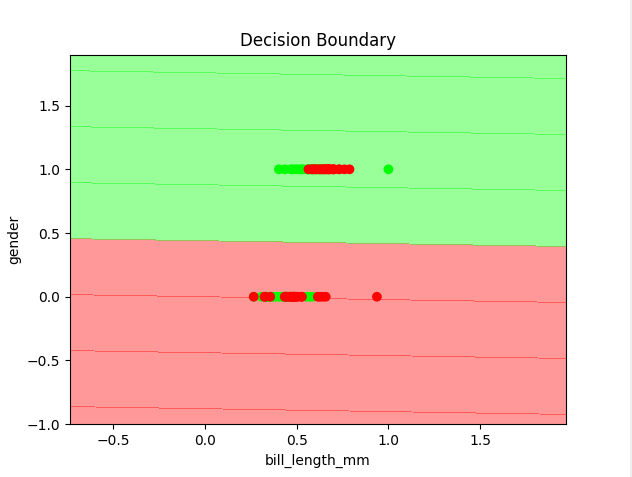
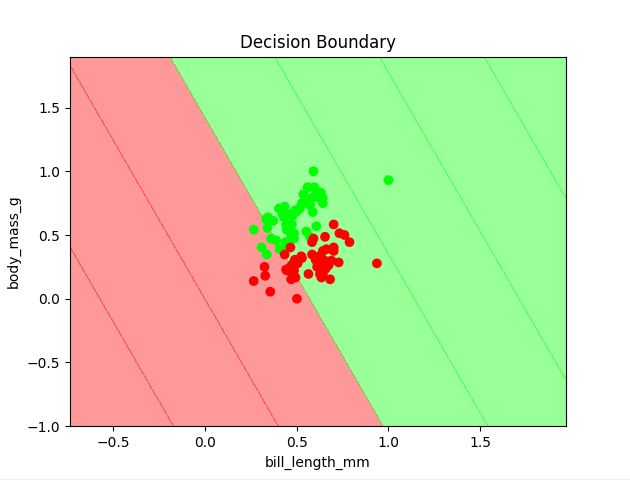
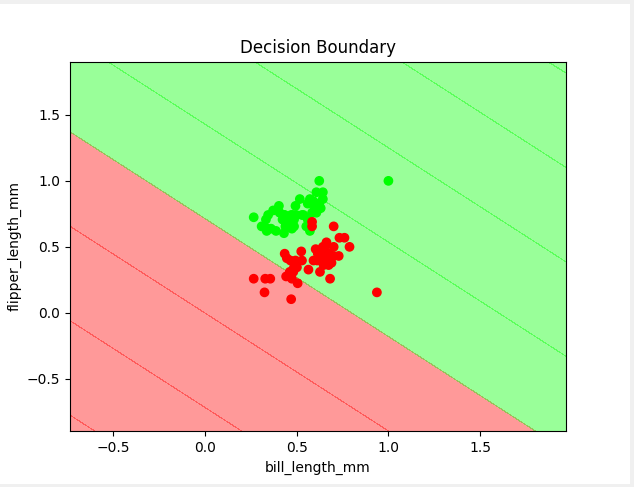
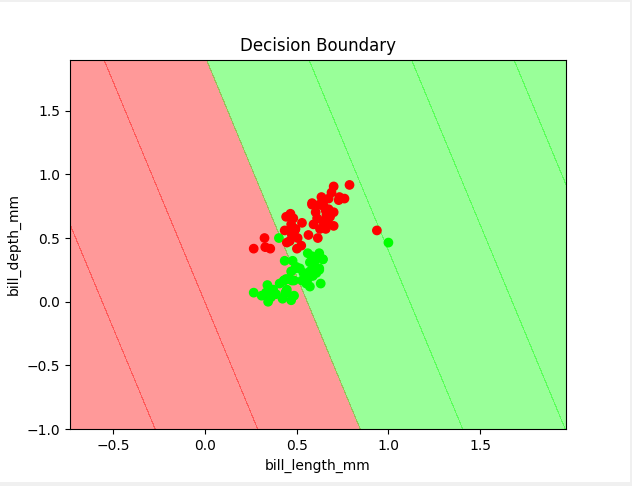
Adelie and Gentoo



Adelie and Chinstrap



Gentoo and Chinstrap



Conclusion

flipper length and bill depth

Body mass and bill depth

Are the best feature to use because they have the least error value and best decision boundary