Day 5: Mini-Project or Competition

Summer STEM: Machine Learning

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Timeline for Implementing the Project

- 9:00AM - 10:00AM Review and Multiclass Classification
- 10:00AM - 10:10AM Team formations (Groups of 2+)
- 10:10AM - 11:00AM Find or build your own data set
- 11:00AM - 11:30 Visualize and understand your data
- 11:30AM - 1:00PM Identify the algorithm you want to use on your data set (think about it during lunch) (Classification/Regression)
- 1:00PM - 2:00PM Train and validate your model, verify accuracy on test set
- 2:00PM - 3:00PM Prepare presentations
- 3:00PM - 4:00PM Presentations

Rules: Mini-Project

- Your dataset should not be a readily available machine learning dataset. Avoid websites like *uci*, *kaggle* etc
- Your dataset needs to be approved by an instructor.
- Both the team members should contribute equally.
- Each team should present for 8-10 minutes.

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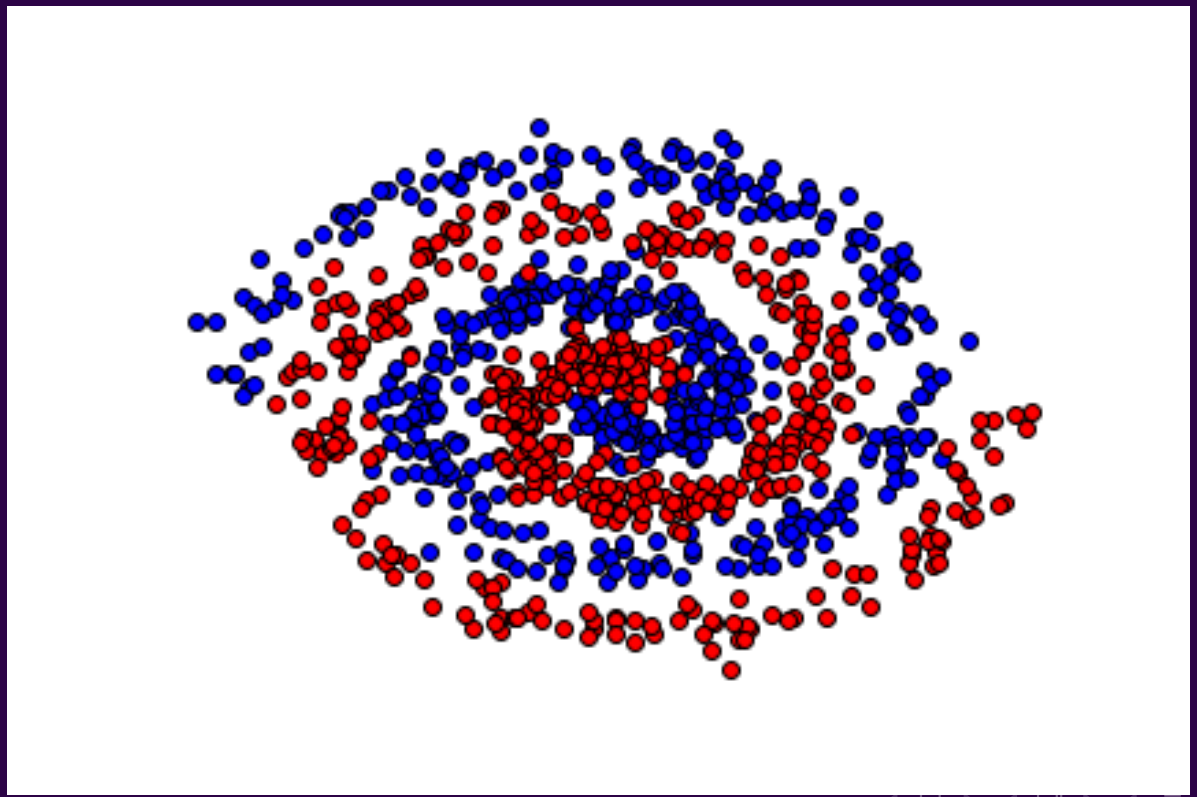
Competition

- Classify dots into class blue or class red
- Success is dependent on your ability to **engineer features**
- More details on Github



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Presentation Template

- Slide 1: Title and introduction
- Slide 2: Explain your data set and cite your data
- Slide 3: What algorithm have you chosen and why?
- Slide 3: Your model and loss function
- Slide 4 & 5: How did you train your model? (Linear/polynomial, did you use K-folds? packages, choice of hyper parameters, etc). Model performance on training set?
- Slide 6: Model performance on test set
- Slide 7: Challenges and learning
- Slide 8: Conclusion

Thank You!

- Next Week: Deep Learning
- Have a fun weekend!
- Revise Revise Revise!