# Capstone Check-In 1

Guidelines and Recommendations

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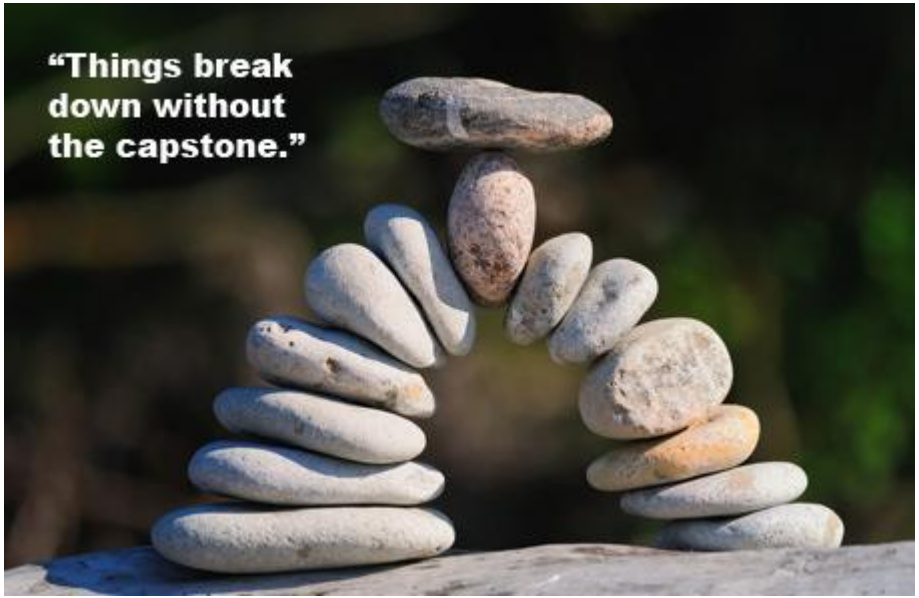
# The Capstone Project

Your Capstone project is the culmination of your time at GA. You will:

- Formulate  an interesting question,
- Collect  the data required to model that data
- Develop the strongest model (or models) for prediction
- Communicate those findings to other data scientists and non-technical individuals.



# Capstone Check-In - Part 1

## What?

- Presenting three potential topics and problems
- Describing your:
  - Goals & criteria for success
  - Potential audience(s)
- IDEALLY, identifying 1-2 potential datasets/data sources (for each problem)

## When?

- Tuesday, December 15th after lunch

## How?

- Lightning Talks! A 3-5 minute presentation that covers 3 potential topics, including potential sources of data, goals, metrics and audience.

# Things to Include in the Talk

1. What is your problem statement? What will you actually be doing?
2. Who is your audience? Why will they care?
3. What is your success metric? How will you know if you are actually solving the problem in a useful way?
4. What is your data source? What format is your data in? How much cleaning and munging will be required?
5. What are potential challenges or obstacles and how will you mitigate them?
6. Is this a reasonable project given the time constraints that you have?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EXAMPLES

# {Project Idea}

- Data will be collected from:
  - Source1
  - Source2
- My MVP (Minimum Viable Project) is: a model and something Else.
- My stretch goals include:
  - Goal1
  - Goal2
- My observations will be _____ and my target will be ____.

I will use __{what}__ data

to build a __{type}__ model

that predicts {target} values

in order to {value prop}.

____

# Additional Notes

- Some potential roadblock
- Something I want to research more is _____.
- I’m not sure if I can even accomplish _____.
- If anyone has recommendations on how to find _____, please let me know!

# EXAMPLE: Hit Streak Predictor

- Data will be collected from ESPN API and Some Stats Website
- My MVP is an daily scraper and the main classification model.
- My stretch goal is an automated pipeline that emails me every morning with the top 5 predictions for the day.
- My observations will be batters, representing a single matchup. My target will be binary, whether or not they got a hit that day.

I will use batter performance data to build a binary classification model that predicts whether or not a batter will get a hit in order to try and win the MLB “Beat the Streak” competition.

# Additional Notes

- Data collection/wrangling will be an issue due to the abundance of data. Each observation will need to be a single day for the batter so I will need to reformat a lot of the information I will have.
- I need to research more expert analysis to see what the important features might be.
- My stretch goal will be difficult, I will need help on automating the process and running it each day at a specific time.
- If anyone has recommendations on how to send emails with python, please let me know!

# EXAMPLE: Produce Image Classifier

- Data will be collected from the flickr API
- My MVP is a NN that beats baseline accuracy for broad produce categories.
- Stretch goal: a species specific model that is deployable on the phone.
- My observations will be single images and the target will be the fruit label.

I will use produce images to build a multi-class classification model that predicts produce type in order to improve a frustrating part of the checkout process..

# Additional Notes

- Image data is “fun” to work with
- We haven’t learned everything about NN yet so you will have to be comfortable implementing topics on the fly.
- Image data is **heavy.**

# Resources

- THE README! (what else? Seriously, read the README!):
  - https://git.generalassemb.ly/DSIR-1019/capstone#capstone-part-1-topic-proposals
  - https://git.generalassemb.ly/DSIR-1019/capstone/blob/master/part_01/README.md
- https://github.com/BrianLKane/capstone
- https://github.com/irinhwng/Image-Classification-of-Fruits-and-Vegetables
- https://gallery.generalassemb.ly/DSI?metro=
- https://toolbox.google.com/datasetsearch
- Places to Get Interesting Datasets (from the Resources repo or Course Wiki)