1. Name, Contact info (e.g. email/phone).
   * Mary Crawley
   * [mcrawley@regis.edu](mailto:mcrawley@regis.edu)
   * 720-653-2510
2. Title of the project
   * Great Barrier Reef (GBR) Crown of Thorns Starfish
3. High-level description of the project: what question or problem are you addressing?
   * Addressing the tracking of Crown of Thorns Starfish (COTS) to help control outbreaks to help protect the GBR.
4. What type of data science task is it? (some example answers but not limited to)
   * Training data
   * visualization
5. Data: Brief description of data. How big do you expect the data will be? Is the amount of your data too big or too small? If you're web-scraping or collecting data, how long do you expect to collect the data?
   * I would say my data will be small-sized as the trained data will be pushed by 3 videos with a 6k count of imagery.
6. How will you analyze the data? What machine learning methods do you plan to use, and/or what business intelligence aspect do you plan on incorporating?
   * I would I will be using Python to analyze the data.
7. Describe any anticipated difficulties and problems. Discuss how you may overcome the problems.
   * Cleaning data that has low image quality
   * Training the data as I’m not the strongest student for this.
   * I never really used Github. Figuring out how to put the codes and ‘Read Me’ into my file will be interesting. Asking lots of actions will help me overcome this.
8. Suggest a timeline for the project.  This should be a weekly breakdown of what you plan on doing each week.
   * Week 1: Gather up data, get to know the data, and organize the data according to what is needed
   * Week 2: Clean up the data and start building historical data
   * Week 3: Data preparation to identify clean data while preparing for data analysis
   * Week 4: start training data to know what images are COTS.
   * Week 5: deep training to make it accurate
   * Week 6: test the quality and accuracy of the image by throwing in random starfish.
   * Week 7: Cleaning up visualizations for a cleaner look
   * Week 8: Edit what is needed while perfecting my project to turn in
9. Create a GitHub repository for your Practicum project. Add this proposal, begin a ReadMe document, and begin adding your data to your repository. Add a link to your GitHub repository to this document.

<https://github.com/CrawleyM29/CrawleyM29-Data-Science-Practicum-Project-Great-Barrier-Reef-COTS.git>