Tool Installation & Set Up	Recommends problem specific tools and can set up any tool stack required.	Aware of a wide range of industry-standard tools and their pros and cons. Can set up and work with basic tools required for the project.	Can install pre-determined tool stack, and has basic understanding of the set up and tool environment.	Cannot install tools or set up environment.
Coding Comprehension	Comments code using best practices for variable names, syntax etc. Further explanation of code is not required.	Writes well commented code that others can understand independently. Has little syntax errors but applies best practice inconsistently.	Code and comments need further clarification.	Code is not sufficiently comprehensible without an explanation. Missing or unclear comments.
Organization	README.md is well written, easily understood, and precise instructions are included. Files created can easily be shared with others. File organization allows for easy collaboration with others.	Keeps files organized and approporiately named. Able to maximize Github file management to easily collaborate with others. Uses generic README.md that provides adequate description.	Files are somewhat organized but README.md file doesn't match content of folder, does not have enough explanations. Naming of files and file structure could be improved so work is more easily shared.	Files are not properly organized, could not be shared easily with others. Teammates unable to work with files created. Missing files.

Create and Train Models	Selects and applies different modeling and variable selection techniques on a case by case basis to find an optimal solution. 	Selects and applies the right modeling technique for a specific problem and chooses appropriate variables to train the model on. Can distinguish between supervised and unsupervised learning.	Knowledge of model options results in correct model choice. Creates model only with provided default parameters.	Has limited knowledge of model options which resulted in inappropriate model choice. Has problem specific knowledge but cannot extrapolate if task changes slightly.
Test & Evaluate Models	Can troubleshoot or debug a model to analyse its performance. Tunes hyper-parameters to improve perfomance of model. 	Understands how model performs and has overview knowledge of evaluation techniques for different types of models. Applies different sampling techniques for model evaluation including cross validation and simple train-test testing.	Chooses correct type of technique, but incorrect metric to evaluate model .	Chooses techniques that are not applicable for model type in question
Tool Installation & Set Up	Recommends problem specific tools and can set up any tool stack required.	Aware of a wide range of industry-standard tools and their pros and cons. Can set up and work with basic tools required for the project.	Can install pre-determined tool stack, and has basic understanding of the set up and tool environment.	Cannot install tools or set up environment.

Data Type Manipulation	Able to parse data, work with a variety of data files including JSON, and CSV files and combine data from different sources. Can create one source table that can be leveraged for visualization and modelling purposes.	Able to parse data and work with a variety of data file types, but struggles to combine multiple data sources into one source table that can be leveraged for visualization and modelling.	Aware that different data file types exist but can only work with one file type at a time and cannot convert one to another.	Aware that different file types exist but not yet able to read or understand all file types. Cannot convert and combine different file types.
Data Cleaning	Thinks beyond basic data cleaning techniques to consider additional data issues (i.e. capitalization of text)	Cleans data to address potential issues by using outlier detection techniques, replacing null values with correct information, and deduplicating data	Implements incomplete set of data cleaning techniques.	Aware of data cleaning techniques but lacks technical skills to implement them.
Additional Data Preparation for Modelling	Determines whether modelling samples are representative of the data needed to answer question. Implements additional checks (for example, determining if model is being built on biased data).	Samples and splits data into different samples so that model can be built on correct sample.	Splits the data and creates samples but samples might be incorrect and have data leakage. Lacks attention to detail when it comes to splitting data and may create bad samples that are not representative of the data.	Can speak to data splitting at a high level but does not have the skills to execute without explicit instruction.

Python	Starting to implement more advanced Python programming techniques such as object oriented programming (creating custom objects).	Implements Python best practices to create functions.	Can distinguish between Python objects and can create basic functions but does not always observe best practices.	Can recognize Python as a language but cannot differentiate between different Python objects.
Data Audit	Identifies potential issues with quality and quantity of data and fixes issues at the source of the data . Generates hypothesis of what can be done with the data.	Assesses quality of data or data source and identifies potential issues by checking for missing values and duplicate rows in addition to other standard techniques	Conducts data quality assessment but has limited understanding of the implications of any quality assessment (uses incomplete QA techniques or incorrectly applied).	Cannot identify steps to follow to assess quality of data.
Exploratory Data Analysis	Uses patterns found during EDA to answer hypothesis generated during audit process through statistics or appropriate visualization techniques.	Identifies basic patterns in data and selects suitable analysis techniques based on data type.	Implements EDA but does not yet understand full value of insights to be gained from EDA.	Can speak to EDA as a process at a high level but does not have the skills to execute.