

Standard / Level	0	1 (Beginning)	2 (Developing)	3 (Accomplished)	4 (Exemplary)
Pick a novel, interesting problem at the right challenge level	Forgot to address	Copied another person's project idea	Repeated analysis done by other people	Picked unique data	Created original work on tricky data or implemented cutting-edge algorithm
Handle text encoding	Forgot to address	Data formatted at least 75% correctly	Data formatted at least 90% correctly	Data formatted 100% correctly	Handled especially tricky issues
Present descriptive statistics and visualizations	Forgot to address	Calculate few statistics or visualizations	Missing either adequate descriptive statistics or visualizations	Explored data enough to understand the domain	Found insights in data and created novel visualization
Preprocess data	Forgot to address	Data not ready for later analysis	100% data in the correct data structure	Explored different methods	Explored different methods with benchmarking
Fit machine learning model	Forgot to address	Not a complete model	Trained model but no prediction	Complete machine learning model (train, test, and validate)	Fit machine learning model not covered in class
Explore alternatives within models	Forgot to address	Used default hyperparameters	Random changed hyperparameters	Systematically tuned hyperparameters	Demonstrated that specific parameters were better than others according to some metric and gave a convincing explanation as to why
Explore alternative between models	Forgot to address	Fit a single model	Fit multiple models	Fit multiple models and compared performance on metrics	Demonstrated that specific models were better than others according to some metric and gave a convincing explanation as to why
Present to a technical audience	Forgot to address	Unintelligible	Unclear, hard-to-follow, and incomplete	Engaging talk with insights and lessons	Live demo!
Commit code to GitHub	Forgot to address	Code not in GitHub	Doesn't have readme or .gitignore	GitHub is clear and understandable	GitHub repo is public
Write code for NLP project	Forgot to address	Code is incomplete	Code doesn't work and is hard to read	Code works and is readable	Code is professional level with comments and tests
X factor - Did something out-of-the-box	Forgot to address	Routine project	Complete standard items as shown in class	Showed creativity	Ground breaking