Category	Report Section	Criteria	Points	
		Additive Points		
Structure	Executive Summary	Comes first on report (easy point!)	1	
Structure	Executive Summary	Short paragraph (3-4 sentences, and be quckly read in 20ish seconds)	1	
Quality of writing	Executive Summary	States the problem, e.g. "forecast acres burned..." as per the README file - should not be copying the README, but paraphrasing at the very least	1	
Quality of writing	Executive Summary	Does NOT say "the dataset I chose" or similar. Remember the AUDIENCE is not the GSIs/Professor, though we're grading it	1	
Technical details	Executive Summary	Succinctly and correctly states only the final model - not the models that didn't make it	1	
Technical details	Executive Summary	Correctly states what final model's forecasts imply for the problem.	1	
			6	**Subtotal**
Quality of writing	Exploratory Data Analysis (EDA)	PLOT: of raw data	2	
Quality of writing	Exploratory Data Analysis (EDA)	Discusses trend, or lack thereof	1	
Quality of writing	Exploratory Data Analysis (EDA)	Discusses seasonality, or lack thereof	1	
Quality of writing	Exploratory Data Analysis (EDA)	Discusses heteroscedasticity, or lack thereof	1	
Technical details	Exploratory Data Analysis (EDA)	Correctly identifies trend	1	
Technical details	Exploratory Data Analysis (EDA)	Correctly identifies seasonal period(s) (or frequencies) if present: j from periodogram is not the period, n/j is the period	1	
Technical details	Exploratory Data Analysis (EDA)	Correctly identifies heteroscedasticity or homoscedasticity	1	
			8	**Subtotal**
Quality of writing	Signal Model (x2)	Model description/explanation succinct and clear. It should not require reading twice! When in doubt, include an equation as your audience is mathematically literate	2	
Quality of writing	Signal Model (x2)	Describes the chosen model, not a travel log of all models tried.	2	
Technical details	Signal Model (x2)	describes how signal model deals with the nonstationary pieces of the time series found in EDA	2	
Structure	Signal Model (x2)	PLOT: demonstrates visually that the residuals/diffs/etc. are stationary (job is complete). ==Even better with a plot of data with the fitted values==	2	
Technical details	Signal Model (x2)	LOSES points if you claim stationarity is shown via ACF or PACF (this is the job of the residual plot)	2	
Technical details	Signal Model (x2)	signal model appropriately addresses trend, if present	2	
Technical details	Signal Model (x2)	signal model appropriately addresses seasonality, if present	2	
Technical details	Signal Model (x2)	signal model appropriately addresses heteroscedasticity, if present (and if possible: VST doesn't solve heter. for stock data)	2	
Structure	ARMA Model (x2)	PLOT: ACF of each signal model residuals. Okay if this is listed in signal model section	2	
Structure	ARMA Model (x2)	PLOT: PACF of each signal model residuals. Okay if this is listed in signal model section	2	
Quality of writing	ARMA Model (x4)	First explains choice of p/q/etc. This usually includes discussing ACF/PACF plots. (auto.arima is okay for one of the two ARMA models, but try to make sense of it)	4	
Quality of writing	ARMA Model (x4)	PLOT: Second, visually shows that your choice fits with at least one of the following: sample ACF with dots for ARMA's theoretical ACF (can simply included on original ACF plot), Ljung box, etc. ==Note that this does not need to be the full set of sarima diagnostic plots.==	4	
Quality of writing	ARMA Model (x4)	Then explains how the visualization shows that the chosen ARMA model fits well	4	
Quality of writing	ARMA Model (x4)	Model name clearly and correctly stated somewhere, e.g. MA(1), AR(2), ARMA(0,2)x(1,3)[7], ARMA(1,1), etc.	4	
Structure	ARMA Model (x4)	ARMA models are given seperate subsections (it's clear where the discussion of one ARMA model begins and the other ends)	2	
Technical details	ARMA Model (x4)	No differencing should be done during the ARMA modeling step: that's part of your signal model.	0	
Technical details	ARMA Model (x4)	Choices of p/q/etc. are defensible based on signal model residuals' ACF or other pursuits (auto.arima is okay for one of the two ARMA models, but try to make sense of it)	4	

				42	Subtotal
Technical details	Model Comparison/Selection	Cross validation performed (required)		1	
Quality of writing	Model Comparison/Selection	Cross validation process clearly and succinctly described (e.g. "Cross validation was done on 40 different (non) overlaping testing datasets, each consisting of 10 years of data, beginning with the 1970-1979 window. Each was forecasted using a training dataset of all the data that occured before the first testing observation")		1	
Structure	Model Comparison/Selection	Table of CV (and perhaps IC) results. (Should be formally formatted, named, and captioned)		2	
Technical details	Model Comparison/Selection	Cross validation has no code errors: your CV value of one model shouldn't be 10x that of another		1	
Quality of writing	Model Comparison/Selection	State your criteria for choosing the best model (based on these CV/IC/etc.)		1	
Quality of writing	Model Comparison/Selection	Clearly state which model is chosen as the best one (that you'll use to forecast and describe in the Results section)		1	
Technical details	Model Comparison/Selection	If AIC/BIC discussed, they are only compared when appropriate (when likelihoods are the same, which is probably only when the signal models are the same). Credit still given if there's no IC's and CV discussion is sufficient.		1	
				8	Subtotal
Quality of writing	Results: mathematical model	Variables/etc. are all defined: don't assume Wt, Xt, Yt are known to the audience. This section is easy to do clearly, and if done formally and well, can be understood by anyone from the mathematical sciences		1	
Quality of writing	Results: mathematical model	It will read a lot better not to use backshift notation, unless you're using a large MSARMA e.g. where (P>0, p>0, and P+p>2) or (Q>0, q>0, and Q+q>2)		1	
Technical details	Results: mathematical model	Variables are written using mathematical symbols and syntax, not texts nor any non-math special characters		1	
Technical details	Results: mathematical model	Mathematical model written out correctly (suggestion: most people's models will be best displayed in two lines: one for signal model, one for ARMA model, connected via Xt)		1	
Quality of writing	Results: parameter estimates	Introduce your table, and point out some interesting things about the values.		1	
Structure	Results: parameter estimates	Table of parameter estimates, of both the signal model and ARMA model parameters (if they exist). This table may be included as a page 7 appendix, but only this table and its title/caption/etc. may be included on page 7		1	
Structure	Results: parameter estimates	No parameter is missing. Remember, all models should estimate sigma^2_W		1	
Technical details	Results: parameter estimates	Variables are written using mathematical symbols and syntax, not texts nor any non-math special characters		1	
Structure	Results: forecasts	PLOT: at least one plot of the forecast in RAW data scale. If using VST, feel free to include a VST scale also, but this is not required.		2	
Technical details	Results: forecasts	Discussion of the forecast results/predictions and their implications for the dataset's problem (and discuss prediction intervals if they are on your plot via sarima.for or other function)		1	
				11	Subtotal
		For general section: 3 points for perfect, 2 points for up to a couple of errors, 1 point for frequent errors, and 0 point for filled with errors			
Structure	General	Plots' axis labels are properly written (not data$fires, etc.), capitalized		3	
Structure	General	Formally references plots and tables, e.g. "Figure 1", "Table 2". So when discussing a plot/figure/table, there should be no ambiguity as to which you are discussing (e.g. "the right panel of Figure 2"). Points lost if you reference a plot and it's not clear which...		3	
Structure	General	Plots are large enough for the points/lines/patterns are easily visible.		3	
Structure	General	Plots have formal names (e.g. Figure 1) and caption that clearly defines the figure (should be able to view the plot without reading the report body)		3	
Structure	General	Sections seperated and appropriately/helpfully labled. "Parametric + ARMA 1" is not appropriate, but "Parametric Signal with MA(3)" is. Models should be discussed in their appropriate sections/subsections.		3	
				15	Subtotal
Forecasts	CSV	Submitted a file on bCourses		4	
Forecasts	CSV	File submitted in correct format (CSV, only one column, 10 rows)		4	
Forecasts	CSV	Comparison of mean-squared prediction error to others with same dataset. Top 1/3 will get 2 points, the middle third 1 point, and the bottom third 0 points.		2	
				10	Subtotal

			100	TOTAL
		Subtractive Points		
		For subtractive section: no points lost for perfect, 1 point for a couple of errors, 3 points for frequent errors; x10 for page limit	Limit	
Structure		10 points lost per page over 6 page limit (except parameter estimates on appendix on page 7), up to 30 points	30	
Quality of writing		Spelling, grammar, etc.	3	
Structure		Do not include code/raw output! This report should be formally formatted.	3	
		Advice		
Structure		Every figure included should be discussed in the text and connected to what your models. Else why is it there?	0	
Quality of writing		Class-specific terms are explained: VST, q-step, etc., whereas ACF/PACF/ARMA are well known (though even for these, best practice is to write out the method then show the acronym, e.g. autocorrelation function (ACF).)	0	
Technical details		The "underfit" models are clearly not "appropriate". Are you overfitting?	0	
Technical details		Dickey-fuller test (you should explain null/alternative hypotheses), decomposition functions (define what we're looking at), and other techniques can be used, but these are all extra: you still must satisfy the other requirements within the 6 page limit. So if you do want to use these, be sure they are constructive to your paper!	0	
Structure		No code need be submitted!		