



Data Boot Camp Grading Rubric

Project #4: Machine Learning Integration

Instructions:

Evaluate the student's submitted Final Project assignment and presentation against the outlined criteria in the rubric below and assign a rating to each criterion. Add points earned across all criteria and convert the total points to a letter grade using the *Recommended Final Project Scoring Breakdown*.

Note:

We encourage students to collaborate and share ideas during the project weeks. Therefore, you may notice shared code, documentation, and/or write-up explanations across student submissions. This is acceptable and should be a consideration when assigning a rating to the student's performance.

Recommended Final Project Scoring Breakdown

Total Rubric Points Achieved	Project Grade
90 or more	A
80–89	B
70–79	C
60–69	D
59 or less	F

Rubric for Skill Drills:

	Proficiency 20 points	Approaching Proficiency 17 points	Partial Proficiency 14 points	Emerging 12 points	Incomplete
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Data Model Implementation	<p>Student produces an analytical model in Python that fulfills all the following specifications:</p> <ul style="list-style-type: none"> ✓ Script initializes, trains, and evaluates a model, or loads a pretrained model from hyperparameter tuning ✓ Script cleans, normalizes, and standardizes input data prior to modeling ✓ Model utilizes data retrieved from a relational database or big data source (SQL or Spark) ✓ Model demonstrates meaningful predictive power (>75% classification accuracy, >80 R-squared) 	<p>Student produces an analytical model in Python that fulfills all the following specifications:</p> <ul style="list-style-type: none"> ✓ Script initializes, trains, and evaluates a model, or loads a pretrained model from hyperparameter tuning ✓ Script cleans, normalizes, and standardizes input data prior to modeling ✓ Model utilizes data retrieved from a relational database or big data source (SQL or Spark) 	<p>Student produces an analytical model in Python that fulfills all the following specifications:</p> <ul style="list-style-type: none"> ✓ Script initializes, trains, and evaluates a model, or loads a pretrained model from hyperparameter tuning ✓ Script cleans, normalizes, and standardizes input data prior to modeling 	<p>Student produces an analytical model in Python that fulfills all the following specifications:</p> <ul style="list-style-type: none"> ✓ Script initializes, trains, and evaluates a model, or loads a pretrained model from hyperparameter tuning -OR- ✓ Script cleans, normalizes, and standardizes input data prior to modeling 	<p>No submission was received</p> <p>-OR-</p> <p>Submission was empty or blank</p> <p>-OR-</p> <p>Submission contains evidence of academic dishonesty</p>
Data Model Optimization	<ul style="list-style-type: none"> ✓ Clear, well-documented evidence of model optimization and performance evaluation in the form of one of the following: <ul style="list-style-type: none"> ✓ A CSV/Excel table showing model designs, testing parameters, and model performance ✓ A Python script that utilizes hyperparameter tuning logic -AND- ✓ Overall model performance is printed or displayed at the end of the script 	<ul style="list-style-type: none"> ✓ Some evidence of model optimization and performance testing within Python scripts -AND- ✓ Overall model performance is printed or displayed at the end of the script 	<ul style="list-style-type: none"> ✓ Overall model performance is printed or displayed at the end of the script 	<ul style="list-style-type: none"> ✓ Performance of the model is unknown/unclear 	
Project and	<ul style="list-style-type: none"> ✓ Successfully uploaded to 	<ul style="list-style-type: none"> ✓ Successfully uploaded to GitHub; 	<ul style="list-style-type: none"> ✓ Successfully uploaded to GitHub; 	<ul style="list-style-type: none"> ✓ Unsuccessful uploads to GitHub 	



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Documentation Uploaded to GitHub	<p>GitHub; demonstrating professional quality of presentation</p> <p>✓ GitHub repository is free of unnecessary files and folders and has an appropriate .gitignore in use</p> <p>✓ The README is customized to a professional level</p>	<p>demonstrating professional quality of presentation</p> <p>✓ GitHub repository has minimal unnecessary files and folders (no more than two) and has an appropriate .gitignore in use</p> <p>✓ The README is customized to a basic level</p>	<p>demonstrating professional quality of presentation</p> <p>✓ GitHub repository has minimal unnecessary files and folders (no more than three)</p> <p>-OR-</p> <p>✓ Does not use a .gitignore text file</p> <p>✓ The README is minimally customized</p>	<p>✓ Does not use a .gitignore text file</p> <p>✓ The README has no customization</p>	
Group Presentation	<p>✓ All group members spoke during presentation</p> <p>✓ Group was well prepared</p> <p>✓ Presentation was relevant to material</p> <p>✓ Presentation maintains audience interest</p>	<p>✓ All group members spoke but didn't split time equally</p> <p>✓ Group was mostly prepared, with minor hiccups</p> <p>✓ Presentation was almost entirely relevant</p>	<p>✓ Some group members barely spoke, others spoke for much longer</p> <p>✓ Group was fairly well prepared but encountered some major hiccups</p> <p>✓ Presentation was mostly relevant</p>	<p>✓ Not all group members spoke during presentation</p> <p>✓ Group seemed unprepared, presentation was scattered or confusing</p> <p>✓ Presentation was not relevant to material</p>	
Slide Deck	<p>✓ Slides are visually clean and professional</p> <p>✓ Slides are relevant to material</p> <p>✓ Slides effectively demonstrate project</p> <p>✓ Slides are clear and maintain audience interest</p>	<p>✓ Slides are visually clean and professional but contain minor areas for improvement</p> <p>✓ Slides are almost entirely relevant to material</p> <p>✓ Slides are mostly effective at demonstrating project</p>	<p>✓ Slides are visually clean and professional but contain areas for improvement</p> <p>✓ Slides are somewhat relevant to material</p> <p>✓ Slides are somewhat effective at demonstrating project</p>	<p>✓ Slides are not visually clean and professional and contain substantial areas for improvement</p> <p>✓ Slides are not relevant to material</p> <p>✓ Slides do not effectively demonstrate project</p>	